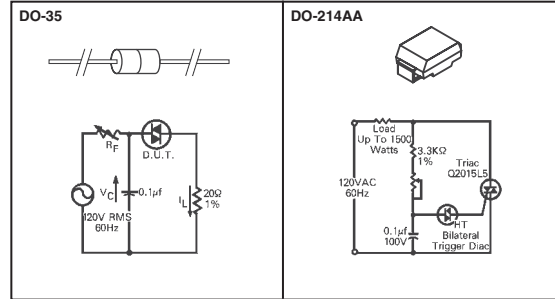


Bilateral Trigger Diacs HT and ST Series

Specifications: • Maximum Ratings, Absolute-Maximum Values • Maximum Trigger Firing Capacitance – 0.1µF; Device dissipation (atTA = -40°C – 40°C) – 250mW; Derate Above 40°C – 3.6mW/°C • Temperature Ranges: Storage -40°C – 125°C; Operating (Junction) -40°C – 125°C • Thermal Resistance: Junction to Ambient (RθJA) = 278°C/W (DO-35); Junction to Lead (RθJL) = 100°C/W (DO-35); 65°C/W (DO-214AA) based on maximum lead temperature of 85°C (DO-35) and 90°C (DO-214AA)

V(BO) (V)		V(BO) Symmetry (V) Max.	Dynamic Breakback Voltage (V)	Digi-Key Part No.	Pricing			Tape and Reel \$	
Min.	Max.				1	10	100	Qty.	Pricing
HT Series — DO-35 — RoHS Compliant									
27	37	3	10	HT32-ND	.16	1.44	12.96	—	—
35	45	3	10	HT40-ND	.14	1.24	11.16	—	—
30	40	3	10	HT35-ND	.14	1.24	11.16	—	—
28	36	4	7	HT32A-ND	.18	1.64	14.76	—	—
30	34	2	7	HT32B-ND	.23	2.06	18.54	—	—
32	36	2	10	HT34B-ND	.23	2.06	18.54	—	—
ST Series — DO-214AA									
32	36	2	10	ST-34BCT-ND†	.88	7.23	61.02	2,500	361.60/M
30	40	3	10	ST-35CT-ND‡	.56	4.61	38.88	2,500	244.80/M

◆ RoHS Compliant † Cut Tape ‡ For Tape and Reel part number, change CT-ND to TR-ND.



Sidacs

General Notes: • All measurements are made at 60Hz with a resistive load at an ambient temperature of 25°C unless otherwise specified • Storage temperature range (TS) is -65°C – 150°C • Junction temperature range (TJ) is -40°C – 110°C • Lead solder temperature is a maximum of 230°C for 10 seconds maximum; ≥ 1/16" (1.59mm) from case.

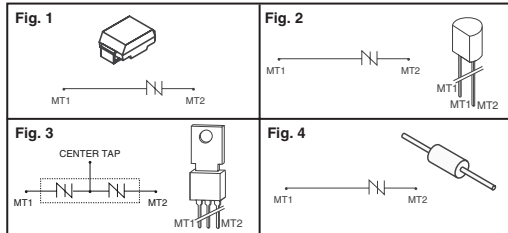
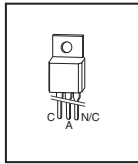


Fig.	Package	IT(RMS) (A)	VDRM (V)	VBO Min. Max.	IDRM (µA)	IBO (µA)	Digi-Key Part No.	Price Each			
								1	10	100	250
1	DO-214	1.0	±90	95 113	5 10	10	K1050SRPCT-ND†	.96	.79	.67	.57
							K1050SRPTR-ND‡	1045.00/2.500			
2	TO-92	1.0	±90	95 113	5 10	10	K1050E70-ND◆	.51	.46	.41	.34
			±90	104 118	5 10	10	K1100E70-ND◆	.51	.46	.41	.34
			±90	120 138	5 10	10	K1300E70-ND◆	.51	.46	.41	.34
			±90	130 146	5 10	10	K1400E70-ND◆	.53	.48	.43	.36
			±90	140 170	5 10	10	K1500E70-ND◆	.53	.48	.43	.36
			±180	190 215	5 10	10	K2000E70-ND◆	.60	.54	.49	.41
			±180	205 230	5 10	10	K2200E70-ND◆	.60	.54	.49	.41
			±190	220 250	5 10	10	K2400E70-ND◆	.65	.58	.52	.44
3	TO-202AB (Non-Isolated)	1.0	±90	110 125	5 10	10	K1200G-ND◆	.53	.48	.43	.36
4	DO-15X	1.0	±90	120 138	5 10	10	K1300G-ND◆	.53	.48	.43	.36
			±90	140 170	5 10	10	K1500G-ND◆	.58	.52	.47	.39
			±180	190 215	5 10	10	K2000G-ND◆	.65	.58	.52	.44
			±190	220 250	5 10	10	K2400G-ND◆	.69	.62	.56	.47
			±200	240 280	5 10	10	K2500G-ND◆	.69	.62	.56	.47
			±200	240 280	5 10	10	K2500G-ND◆	.69	.62	.56	.47

◆ RoHS Compliant † Cut Tape ‡ Tape and Reel

Glass Passivated Silicon Rectifiers



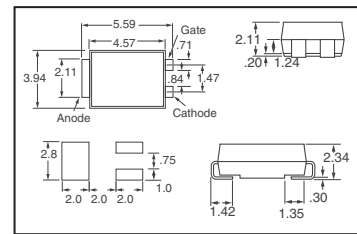
Package	IT RMS (A)	VRRM (V)	IFSM (A)	VFM (V)	Digi-Key Part No.	Price Each					
						1	10	100	250	500	1,000
TO-220AB (Isolated)	15	200	225	1.6	D2015L-ND	1.15	1.03	.93	.77	.67	.65
	15	400	225	1.6	D4015L-ND	1.22	1.09	.98	.82	.71	.68
	15	600	225	1.6	D6015L-ND	1.29	1.15	1.04	.87	.75	.72
	20	400	300	1.6	D4020L-ND	1.36	1.21	1.09	.91	.79	.76
	20	600	300	1.6	D6020L-ND	1.43	1.28	1.15	.96	.83	.80
	20	800	300	1.6	D8020L-ND	1.52	1.36	1.22	1.02	.89	.85
	25	400	350	1.6	D4025L-ND	1.64	1.46	1.32	1.10	.95	.91
	25	600	350	1.6	D6025L-ND	1.73	1.54	1.39	1.16	1.00	.97

Sensitive Gate SCRs Non-Isolated



IT RMS (A)	VDRM VRRM (V)	Package	IGT (µA)	IDRM IRRM @25°C (µA)	VTM @25°C (V)	VGT @25°C (V)	IH (mA)	Digi-Key Part No.	Cut Tape Price Each				Digi-Key Part No.	Tape and Reel Pricing 2,500
									1	10	100	250		
0.8	200	COMPAK	200	2.0	1.7	0.8	5.0	S2SCT-ND◆	.80	.66	.56	.48	S2STR-ND◆	348.50/M
	400							S4SCT-ND◆	.88	.73	.62	.52	S4STR-ND◆	384.20/M
	600							S6SCT-ND	1.12	.92	.78	.67	S6STR-ND	487.90/M
	200	COMPAK	50	2.0	1.7	0.8	5.0	S2S2CT-ND◆	.92	.76	.64	.55	S2S2TR-ND◆	401.20/M
	400							S4S2CT-ND◆	1.00	.82	.70	.59	S4S2TR-ND◆	435.20/M
	600							S6S2CT-ND◆	1.24	1.02	.86	.74	S6S2TR-ND◆	540.60/M

◆ RoHS Compliant

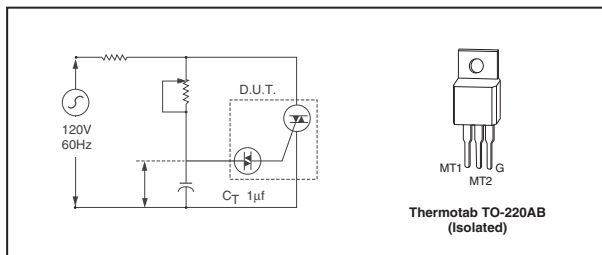


Internally Triggered Quadrac® Triacs (4.0-15 Amps)



General Description: QUADRAC is a triac that includes a diac trigger mounted inside the same package. This device saves the user the expense and assembly time of buying a discrete diac and assembling in conjunction with a gated triac. QUADRAC is a bidirectional AC switch and is gate controlled for either polarity of main terminal voltage. Its primary purpose is for AC switching and phase control applications such as speed controls, temperature modulation controls, and lighting controls.

Features: • Glass passivated junctions • Electrically isolated package • Internal trigger diac • High surge capability - up to 150 Amps • High voltage capability: 200 up to 600 volts • IDRM @25°C: 0.5mA • VTM @25°C: 1.6V • Capacitance: 0.1µF • Igt: 3µsec. **Electrical Isolation:** Isolated TO-220 Quadrac package will withstand a minimum high potential test of 2500VAC (RMS) from leads to case over the operating temperature range of the device. **Electrical Isolation From Leads to Case:** U.L. Recognized File No. 71639



IT RMS (A)	VDRM (V)	IGTM (A)	VBO (V) Min. Max.	IBO (µA)	IH (mA)	Digi-Key Part No.	Price Each		
							1	10	100
4.0	200	1.2	33 43	25 40	40	Q2004LT-ND	1.11	.99	.89
	400					Q4004LT-ND	1.20	1.07	.96
	600					Q6004LT-ND	1.43	1.28	1.15
8.0	200	1.5	33 43	25 60	60	Q2008LT-ND	1.34	1.19	1.08
	400					Q4008LT-ND	1.45	1.30	1.17
	600					Q6008LT-ND	1.73	1.54	1.39
	600					Q6008LTH-ND†	1.78	1.58	1.43
10.0	400	1.5	33 43	25 60	60	Q4010LT-ND	1.59	1.42	1.28
	600					Q6010LTH-ND†	1.91	1.71	1.54
15.0	400	1.5	33 43	25 70	70	Q4015LT-ND	1.80	1.60	1.44
	600					Q6015LT-ND	2.14	1.91	1.72
	600					Q6015LTH-ND†	2.19	1.95	1.76

† No snubber network required, best dv/dt and noise immunity.

Digi-Reel® Most SMT cutdown parts are available on a Digi-Reel®. For Digi-Reel part number, change 1-ND to 6-ND or CT-ND to DKR-ND. See Digi-Key® Services on page 2 for additional information.

More Product Available Online: www.digikey.com

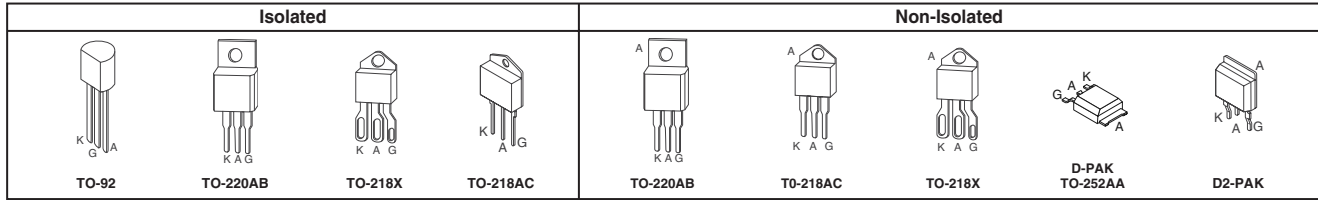
Toll-Free: 1-800-344-4539 • Phone 218-681-6674 • Fax: 218-681-3380

Sensitive Gate (0.8-10 Amps) and Non-Sensitive Gate (1-70 Amps) SCRs

Thyristor SCR semi-conductors are half-wave, unidirectional, gate-controlled rectifiers. Both Sensitive Gate and Non-Sensitive Gate SCRs in a choice of 3 different electrically isolated packages and 5 non-isolated packages. Electrically Isolated Packages: Isolate the case or tab internally to allow the use of low cost assembly and convenient packaging techniques. Teccor offers electrical isolation in the TO-92, TO-220AB, and TO-218 type packages. Glass Passivation: SCRs feature glass passivated device junctions to ensure long term device reliability and parameter stability. Glass offers a rugged, reliable barrier against junction contamination.

Sensitive Gate Type: The sensitive SCR semiconductors complement the line of power SCRs.
Features: • Current Ratings: 0.8-10 Amps • Voltage Ratings: 30-600 Volts • Gate Sensitivities: 12-500 microamps • Surge Current: up to 100 Amps

Non-Sensitive Gate Type: The thyristor SCR semiconductors complement the line of sensitive gate SCRs.
Features: • Current Ratings: 1-70 Amps • Voltage Ratings: 100-800 Volts • Gate Sensitivities: 10-50 milliamps • Surge Current: up to 950 Amps



IT RMS (A)	VDRM & VRRM (V)	Package	IGT (mA)		IDRM & IRRM @25°C (mA)	VTM @25°C (V)	VGT @25°C (V)	PG(AV) (W)	t _{gt} (µsec.)	Digi-Key Part No.	Price Each			Tape and Reels	
			Min.	Max.							1	10	100	Qty.	Pricing
Sensitive Gate — Isolated															
0.8	200	TO-92	—	.200	.001	1.7	0.8	0.1	2.2	2N5064-ND	.39	.35	.32	—	—
	400									EC103B-ND	.32	.29	.26	—	—
	600									EC103D-ND	.37	.33	.30	—	—
0.8	600	TO-92	—	0.012	.002	1.7	0.8	0.1	2.0	EC103M-ND	.44	.39	.36	—	—
	200									EC103N-ND	.53	.48	.43	—	—
	400									EC103P-ND	.39	.35	.32	—	—
1.5	200	TO-92	—	.200	.001	1.5	0.8	0.1	2.2	TCR22-4-ND	.44	.39	.36	—	—
	400									TCR22-6-ND	.44	.39	.36	—	—
	600									TCR22-8-ND	.53	.48	.43	—	—
6.0	400	TO-220AB	—	.200	.005	1.6	0.8	0.1	4.0	S4006LS2-ND	.99	.89	.80	—	—
	200									S2008LS2-ND	.99	.89	.80	—	—
	400									S4008LS2-ND	1.08	.97	.87	—	—
10.0	400	TO-220AB	—	.200	.005	1.6	0.8	0.1	2.2	S4010LS2-ND	1.18	1.05	.95	—	—
	200									S2008DS2CT-ND†	1.04	.86	.73	2,500	453.90/M
	400									S4004DS2CT-ND†	1.12	.92	.78	2,500	487.90/M
6.0	200	TO-252AA	—	.200	.005	1.6	0.8	0.1	4.0	S2006DS2CT-ND†	1.08	.89	.75	2,500	470.90/M
	400									S6006DS2CT-ND†	1.44	1.19	1.00	2,500	627.90/M
	600									S2008DS2CT-ND†	1.16	.95	.81	2,500	504.90/M
Non-Sensitive Gate — Isolated															
1.0	200	TO-92	1	10	.01	1.6	1.5	0.3	2.0	S201E-ND	.51	.46	.41	—	—
	400									S401E-ND	.53	.48	.43	—	—
	600									S601E-ND	.58	.52	.47	—	—
6.0	200	TO-220AB	1	15	.01	1.6	1.5	0.5	2.0	S2006L-ND	.88	.78	.71	—	—
	400									S4006L-ND	.92	.82	.74	—	—
	600									S6006L-ND	.99	.89	.80	—	—
8.0	200	TO-220AB	1	15	.01	1.6	1.5	0.5	2.0	S2008L-ND	.99	.89	.80	—	—
	400									S4008L-ND	1.04	.93	.83	—	—
	600									S6008L-ND	1.11	.99	.89	—	—
10.0	200	TO-220AB	1	15	.01	1.6	1.5	0.5	2.0	S2010L-ND	1.08	.97	.87	—	—
	400									S4010L-ND	1.15	1.03	.93	—	—
	600									S6010L-ND	1.22	1.09	.98	—	—
15.0	400	TO-220AB	1	30	.01	1.6	1.5	0.6	2.0	S4015L-ND	1.25	1.11	1.00	—	—
	600									S6015L-ND	1.31	1.17	1.06	—	—
	800									S8015L-ND	1.41	1.25	1.13	—	—
20.0	200	TO-220AB	1	30	.01	1.6	1.5	0.6	2.0	S2020L-ND	1.31	1.17	1.06	—	—
	400									S4020L-ND	1.41	1.25	1.13	—	—
	600									S6020L-ND	1.50	1.34	1.20	—	—
25.0	200	TO-220AB	1	35	.01	1.6	1.5	0.8	2.0	S8020L-ND	1.59	1.42	1.28	—	—
	400									S2025L-ND	1.55	1.38	1.24	—	—
	600									S4025L-ND	1.66	1.48	1.33	—	—
35.0	200	TO-218AC	5	40	.01	1.8	1.5	0.8	2.0	S6025L-ND	1.75	1.56	1.41	—	—
	400									S8025L-ND	1.87	1.66	1.50	—	—
	600									S2035K-ND	3.37	3.00	2.70	—	—
65.0	200	TO-218X	5	50	.01	1.8	1.5	0.8	2.0	S4035K-ND	3.60	3.20	2.88	—	—
	400									S6035K-ND	3.83	3.41	3.07	—	—
	600									S8035K-ND	4.06	3.61	3.25	—	—
70.0	200	TO-218X	5	50	.02	1.8	2.0	1.0	2.5	S2065J-ND	5.51	4.90	4.41	—	—
	400									S4065J-ND	5.90	5.25	4.73	—	—
	600									S6065J-ND	6.30	5.60	5.04	—	—
70.0	200	TO-218X	5	50	.02	1.8	2.0	1.0	2.5	S2065K-ND	5.40	4.80	4.32	—	—
	400									S4065K-ND	5.79	5.15	4.64	—	—
	600									S6065K-ND	6.53	5.81	5.23	—	—
Non-Sensitive Gate — Non-Isolated															
6.0	200	TO-252AA	1	15	.01	1.6	1.5	0.5	2.0	S2006DCT-ND†	1.12	.92	.78	2,500	487.90/M
	400									S4006DCT-ND†	1.20	.99	.84	2,500	523.60/M
	600									S2008R-ND	.88	.78	.71	—	—
8.0	200	TO-220AB	1	15	.01	1.6	1.5	0.5	2.0	S4008R-ND	.95	.84	.76	—	—
	400									S6008R-ND	1.01	.91	.82	—	—
	600									S4012R-ND	1.08	.97	.87	—	—
12.0	400	TO-220AB	1	20	.01	1.6	1.5	0.5	2.0	S8012DCT-ND†	1.76	1.45	1.22	2,500	766.70/M
	600									S4016NRPCT-ND†	2.28	1.87	1.58	500	496.40
	800									S6016NRPCT-ND†	2.40	1.97	1.67	500	522.75
16.0	400	D2-PAK	1	30	.01	1.6	1.5	0.6	2.0	S8016NRPCT-ND†	2.56	2.10	1.78	500	557.60
	600									S6025R-ND	1.59	1.42	1.28	—	—
	800									S8025R-ND	1.68	1.50	1.35	—	—
25.0	600	TO-220AB	1	35	.01	1.6	1.5	0.8	2.0	S6025NRPCT-ND†	3.12	2.56	2.16	500	680.00
	800									S8025NRPCT-ND†	3.32	2.73	2.30	—	—
	400									S4040R-ND	2.51	2.24	2.02	—	—
40.0	800	TO-220AB	5	40	.02	1.8	1.5	0.8	2.5	S8040R-ND	2.86	2.55	2.29	—	—
	1000									SK040R-ND	3.02	2.69	2.42	—	—
	200									S8055M-ND	3.97	3.53	3.18	—	—
55.0	800	TO-218AC	5	40	.02	1.8	1.5	0.8	2.5	S2055W-ND	3.71	3.30	2.97	—	—
	200									S2055R-ND	2.47	2.20	1.98	—	—
	400									S6055R-ND	2.81	2.51	2.26	—	—
70.0	600	TO-220AB	5	40	.01	1.8	1.5	0.8	2.5	S8055R-ND	3.00	2.67	2.40	—	—
	800									S6070W-ND	5.83	5.19	4.67	—	—

† RoHS Compliant ‡ .05mA@125°C † Cut Tape § For Tape and Reel part number, change CT-ND to TR-ND.

Digi-Reel® Most SMT cutdown parts are available on a Digi-Reel®. For Digi-Reel part number, change 1-ND to 6-ND or CT-ND to DKR-ND. See Digi-Key® Services on page 2 for additional information.

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