VARO SEMICONDUCTOR, INC., P.O. Box 469013
1000 N. Shiloh; Garland, Texas 75046-9013
(214) 271-8511 TWX 910-860-5178

DLS 048

TO-3 CASE

30 Amp Center Tapped Silicon Integrated Rectifiers

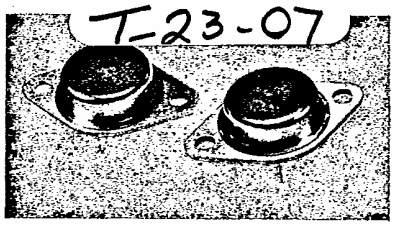
January 1984

Controlled Avalanche Types with 250V, 450V, and 650V Minimum Avalanche Ratings

Non-Controlled Avalanche Types with 100V, 200V, 400V and 600V V_{RRM} Ratings

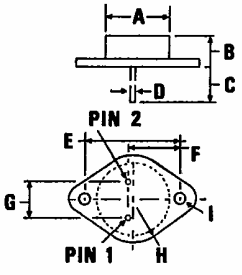
250 Amps Peak One Half Cycle Surge Current

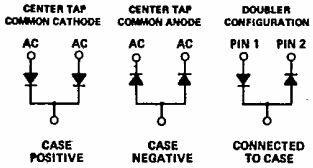
Fast Recovery Types with 200 Nanosecond Maximum t_{rr}



MAXIMUM RATING AT T_A = 25°C (unless otherwise specified)	SYMBOL	CONTROLLED AVALANCHE			NON-CONTROLLED AVALANCHE				FAST RECOVERY TIME				UNITS
Series Number		R702	R704	R706	R711	R712	R714	R716	R711X	R712X	R714X	R716X	
DC Blocking Voltage Working Peak Reverse Voltage Peak Repetitive Reverse Voltage	V_{RM} V_{RWM} V_{RRM}	200	400	600	100	200	400	600	100	200	400	600	Volts
RMS Reverse Voltage	$V_{R(RMS)}$	140	280	420	70	140	280	420	70	140	280	420	Volts
Power Dissipation In $V_{(BR)}$ Region for 100 μ sec Square Wave (Per diode)	P_{RM}	1500			NA				NA				Watts
Continuous Power Dissipation In $V_{(BR)}$ Region at T_C = 100°C (Per diode)	P_R	4			NA				NA				Watts
Peak Surge Current, ½ Cycle at 60 Hz, (Non-Rep) and T_C = 100°C (Per diode) (Fig. 2)	I_{FSM}	300							150				Amps
Peak Surge Current, 1 sec at 60 Hz and T_C = 100°C (Per diode) (Fig. 2)	I_{FRM}	60							50				Amps
Avg. Forward Current at T_C = 100°C (Per diode)	I_O	15											Amps
Junction Operating and Storage Temperature Range	T_J, T_{STG}	−65 to +150											°C
Fusing Data	I^2T	375							95				Amp² Sec.

ELECTRICAL CHARACTERISTICS AT T_A=25°C (unless otherwise specified)	SYMBOL	CONTROLLED AVALANCHE			NON-CONTROLLED AVALANCHE				FAST RECOVERY TIME				UNITS
Series Number		R702	R704	R706	R711	R712	R714	R716	R711X	R712X	R714X	R716X	
Minimum Avalanche Voltage	V_{BR}	250	450	650	NA				NA				Volts
Maximum Avalanche Voltage	V_{BR}	700	900	1100	NA				NA				Volts
Maximum Instantaneous Forward Voltage Drop (Per diode) at 15 Amps (Fig. 3)	V_{FM}	1.2							1.4				Volts
Maximum Reverse Current at Rated V_{RM} at T_C=100°C	I_{RM}	1							5				mA
Maximum Reverse Recovery Time at I_F=1A, I_R=2A (Fig. 5)	t_{rr}	NA							200				nsec
Maximum Thermal Resistance, Junction to Case	$R_{\theta J\text{-}C}$	1.5											°C/W





NOTE: Standard device is common cathode. To order common anode, add "A" to part no. To order doubler, add "E" to part no.

All JEDEC TO-3 dimensions and notes are applicable.

LTR	INCHES	MILLIMETERS
A	.77 Dia.	19,56
B	.323-.342	8,20-8,69
C	.40 Min.	10,16
D	.038-.043 Dia.	,97-1,09
E	1.180-1.194	29,97-30,33
F	.665-.675	16,89-17,15
G	.426-.440	10,82-11,18
H	.525R max.	13,34
I	.151-.161 Dia.	3,34-4,09

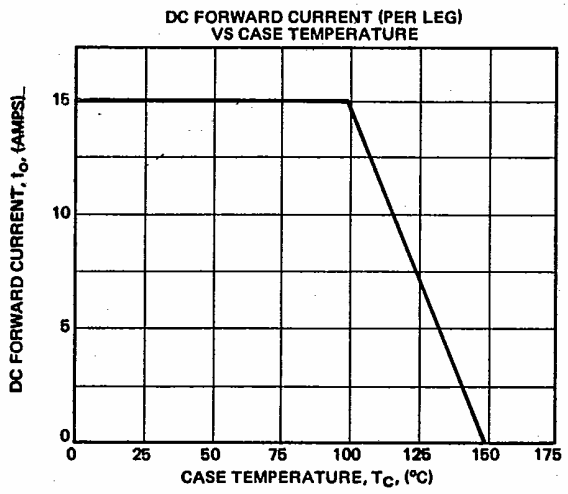


FIGURE 1

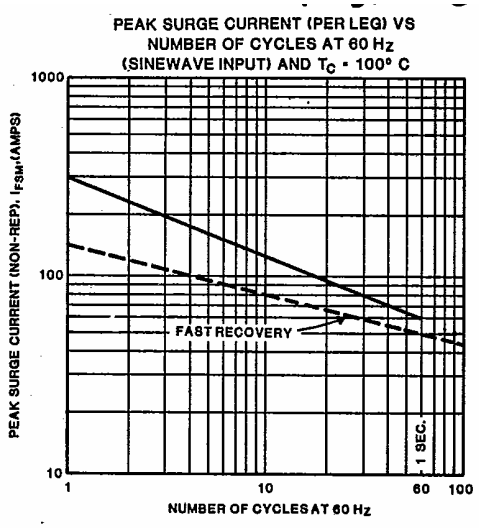


FIGURE 2

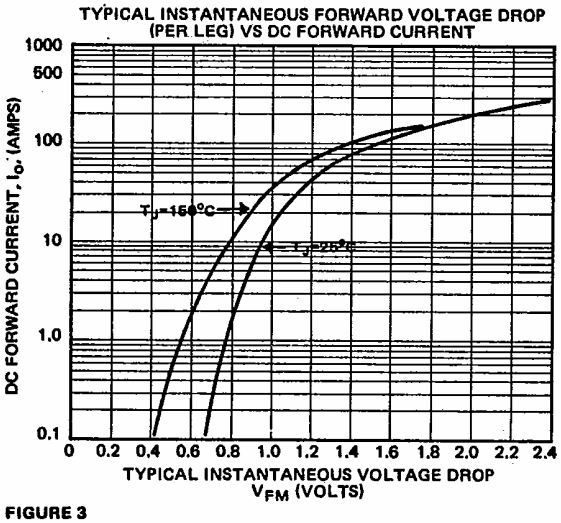


FIGURE 3

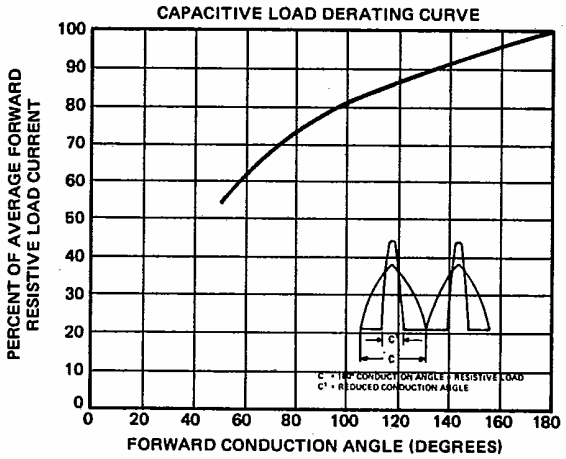


FIGURE 4

TYPICAL RECOVERY TEST CIRCUIT

SEE PAGE 49 FOR DIAGRAM

RECOVERY WAVE FORM