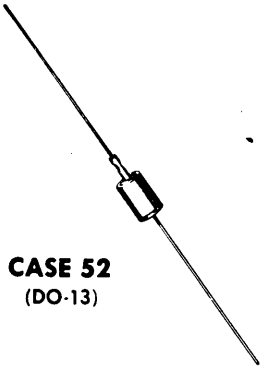
1N91 thru 1N93

$V_R = 100 - 300$ V
$I_O = 1.0$ A



CASE 52
(DO-13)

Low-current germanium rectifiers for applications requiring extremely low forward voltage drop, low power dissipation, and high rectification efficiency, such as biasing and battery charging circuits.

MAXIMUM RATINGS*

Rating	Symbol	1N91	1N92	1N93	Unit
Peak Repetitive Reverse Voltage (Rated I_O, $T_A \leq 55°C$, see Figure 2)	$V_{RM(rep)}$	100	200	300	Volts
DC Blocking Voltage $T_A \leq 80°C$	V_R	100	200	300	Volts
$T_A \geq 80°C$		Derate V_R 6.7%/°C above 80°C			
Average Rectified Forward Current (Single Phase, Resistive Load, 60 Hz) $T_A = 55°C$, 100% V_{RM}	I_O	1.0			Amp
$T_A = 75°C$, 50% V_{RM}		0.25			
Non-Repetitive Peak Surge Current (Surge Applied at Rated Load Conditions, see Figure 4)	$I_{FM(surge)}$	30			Amp
Operating Junction Temperature Range	T_J	-65 to +95			°C
Storage Temperature Range	T_{stg}	-65 to +125			°C

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Ambient 1 inch Leads	θ_{JA}	100	°C/W
1/4 inch Leads		70	

ELECTRICAL CHARACTERISTICS

Characteristics	Symbol	Max	Unit
Peak Forward Voltage Drop (I_F = 150 mAdc, T_A = 25°C, see Figure 1)	V_F	0.45	Volts
DC Reverse Current (Rated V_R, T_A = 25°C, see Figure 3)	I_R	0.22	mA

* These ratings and characteristics as specified may surpass those specified in the original JEDEC registration for these device types.

FIGURE 1 — FORWARD CHARACTERISTICS

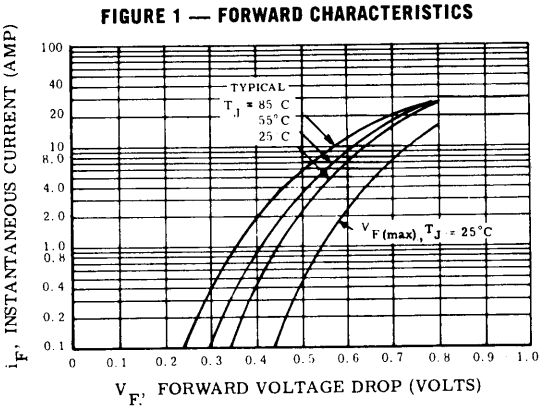


FIGURE 2 — MAXIMUM CURRENT RATINGS

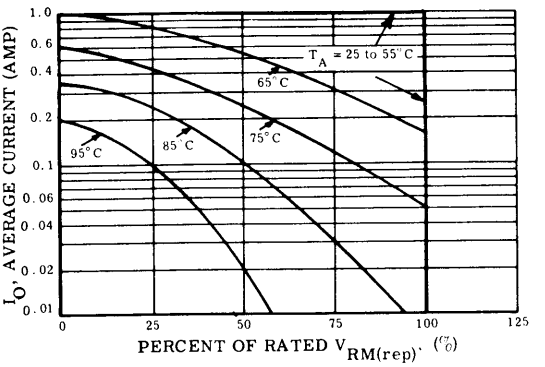


FIGURE 3 — TYPICAL REVERSE CHARACTERISTICS

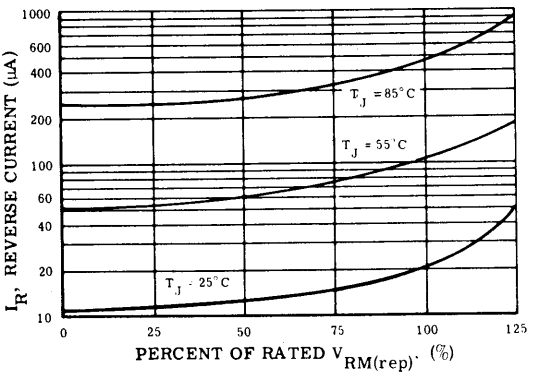


FIGURE 4 — MAXIMUM SURGE CURRENT