

- 1N6638, 1N6642, 1N6643 AVAILABLE IN JAN, JANTX, JANTXV, AND JANS PER MIL-PRF-19500/578
- SWITCHING DIODES
- NON-CAVITY GLASS PACKAGE
- METALLURGICALLY BONDED

1N6638

1N6642

1N6643

MAXIMUM RATINGS

Operating Temperature: -65°C to +175°C

Storage Temperature: -65°C to +175°C

Operating Current: 300 mA

Derating: 3.0 mA/°C Above $T_L = +75^\circ\text{C}$ @ $L = 3/8"$

Surge Current: $I_{FSM} = 2.5\text{A}$, half sine wave, $P_W = 8.3\text{ms}$

ELECTRICAL CHARACTERISTICS @ 25°C, unless otherwise specified.

TYPES	V_{BR} @ I_R = 100 μA	V_{RWM}	V_{F1} I_{FM} = 10 mA (Pulsed)	V_{F2} @ I_{F2} (Pulsed)		t_{fr} I_F = 50 mA	t_{rr}
	$V_{(PK)}$ (min)	$V_{(PK)}$	V_{dc}	V_{dc}	mA	ns	ns
1N6638	150	125	0.8	1.1	200	20	4.5
1N6642	100	75	0.8	1.2	100	20	5.0
1N6643	75	50	1.0	1.2	100	20	6.0

TYPES	I_{R1}	I_{R2}	I_{R3}	I_{R4}	C_{T1}	C_{T2}
	V_R = 20 V	@ V_R = V_{RWM}	$V_R = 20\text{ V}$ $T_A = 150^\circ\text{C}$	$V_R = V_{RWM}$ $T_A = 150^\circ\text{C}$	$V_R =$ 0V	$V_R =$ 1.5V
	nA dc	μA dc	μA dc	μA dc	pF	pF
1N6638	35	0.5	50	100	2.5	2.0
1N6642	25	0.5	50	100	5.0	2.8
1N6643	50	0.5	75	160	5.0	2.8

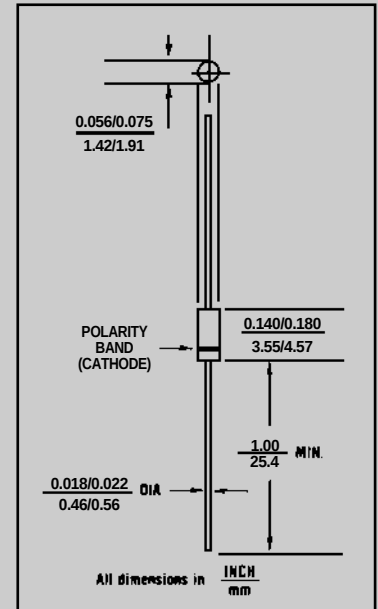


FIGURE 1

DESIGN DATA

CASE: Hermetically sealed, "D" Body per MIL-PRF- 19500/578. D-5D

LEAD MATERIAL: Copper clad steel

LEAD FINISH: Tin / Lead

THERMAL RESISTANCE: ($R_{\theta JL}$): 160 °C/W maximum at $L = .375$

THERMAL IMPEDANCE: ($Z_{\theta JX}$): 25 °C/W maximum

POLARITY: Cathode end is banded.

MOUNTING POSITION: Any



IN6638, IN6642 and IN6643

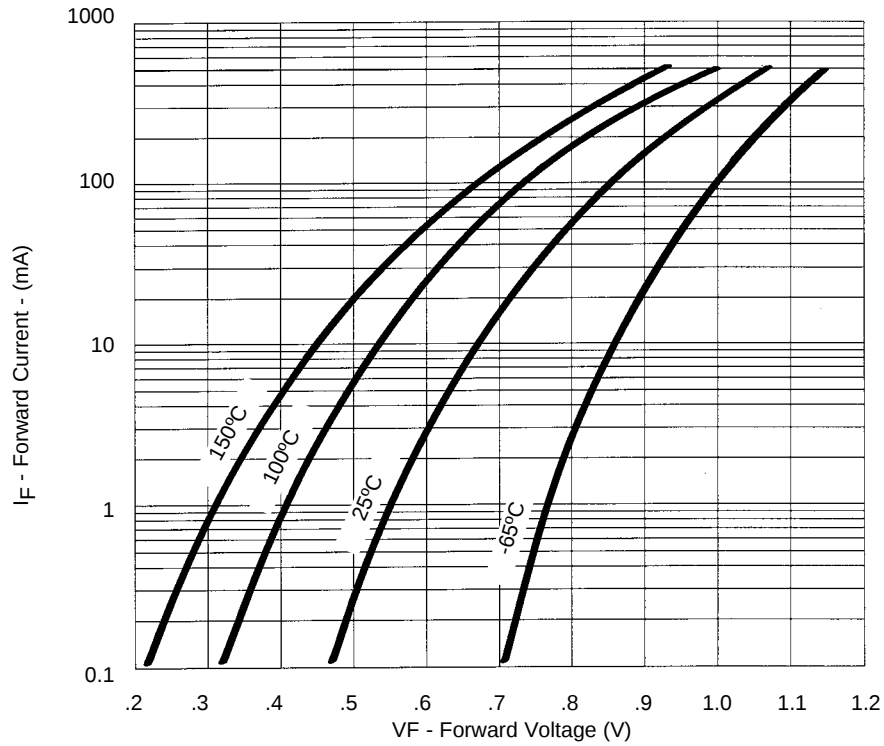


FIGURE 2
Typical Forward Current
vs Forward Voltage

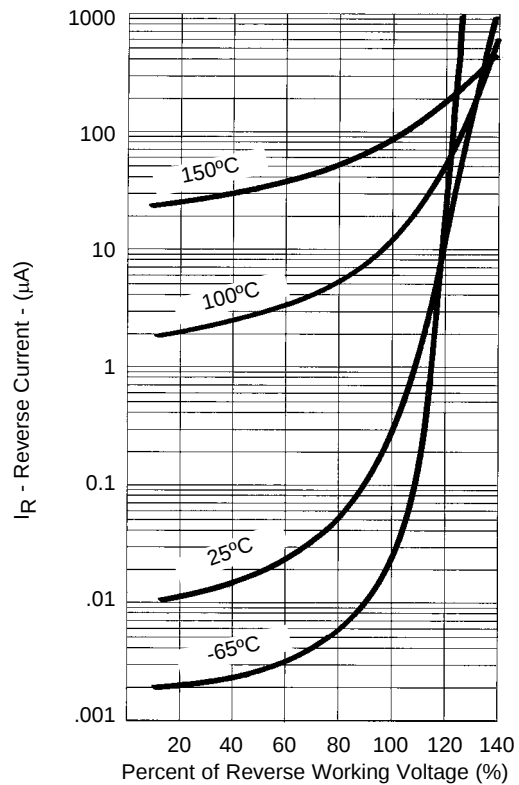


FIGURE 3
Typical Reverse Current
vs Reverse Voltage

NOTE : All temperatures shown on graphs are junction temperatures