

SMALL SIGNAL SCHOTTKY DIODES

VOLTAGE RANGE: 60 V
CURRENT: 400 mW

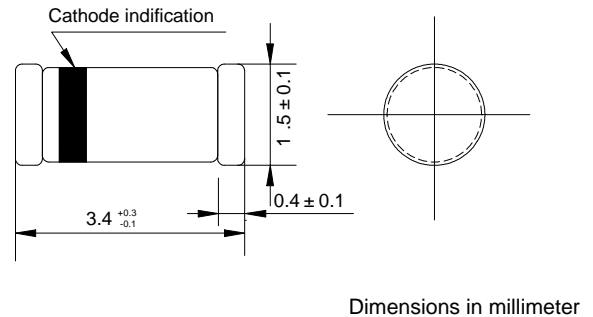
FEATURES

- ◇ For general purpose applications
- ◇ Metal silicon schottky barrier device which is protected by a PN junction guard ring. The low forward voltage drop and fast switching make it ideal for protection of MOS devices, steering, biasing and coupling diodes for fast switching and low logic level applications

MECHANICAL DATA

- ◇ Case: JEDEC MINI-MELF, glass case
- ◇ Polarity: Color band denotes cathode end
- ◇ Weight: Approx 0.031 grams

MINI-MELF



ABSOLUTE RATINGS(LIMITING VALUES)

	Symbols	Value	UNITS
Peak reverse voltage	V_{RRM}	60	V
Power dissipation (Infinite Heat Sink)	P_{tot}	400 ¹⁾	mW
Maximum single cycle surge 10 μ s square wave	I_{FSM}	2.0	A
Junction temperature	T_J	125	$^{\circ}$ C
Storage temperature range	T_{STG}	-55 ---+ 150	$^{\circ}$ C

1)Valid provided that electrodes are kept at ambient temperature.

ELECTRICAL CHARACTERISTICS

(Ratings at 25 $^{\circ}$ C ambient temperature unless otherwise specified)

	Symbols	Min.	Typ.	Max.	UNITS
Reverse breakdown voltage @ $I_R=10\mu A$	V_R	60.0			V
Leakage current @ $V_R=50V$	I_R			200.0	nA
Forward voltage drop @ $I_F=1.0mA$ $I_F=15mA$	V_F			0.41 1.0	V
Junction capacitance @ $V_R=0V, f=1MHz$	C_J		2.2		pF
Reverse recovery time @ $I_F=I_R=5mA, recover to 0.1 I_R$	t_{rr}		1.0		ns
Thermal resistance junction to ambient air	$R_{\theta JA}$			0.3	$^{\circ}$ C/mW

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FIG.1 – TYPICAL VARIATION OF FWD. CURRENT VS FWD. VOLTAGE FOR PRIMARY CONDUCTION THROUGH THE SCHOTTKY BARRIER

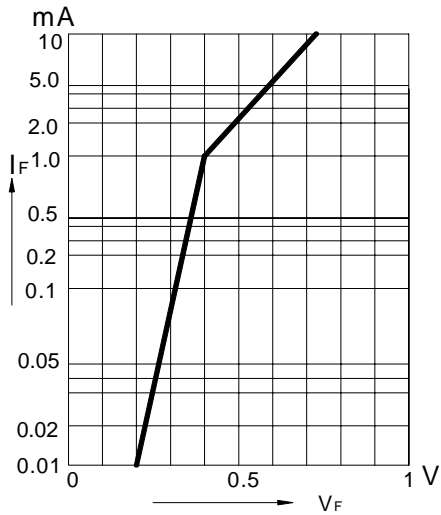


FIG.2 – TYPICAL FORWARD CONDUCTION CURVE OF COMBINATION SCHOTTKY BARRIER AND PN JUNCTION GUARD RING

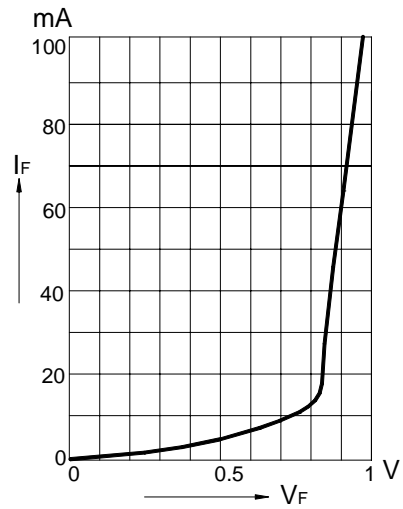


FIG.3 – TYPICAL VARIATION OF REVERSE CURRENT AT VARIATION TEMPERATURES

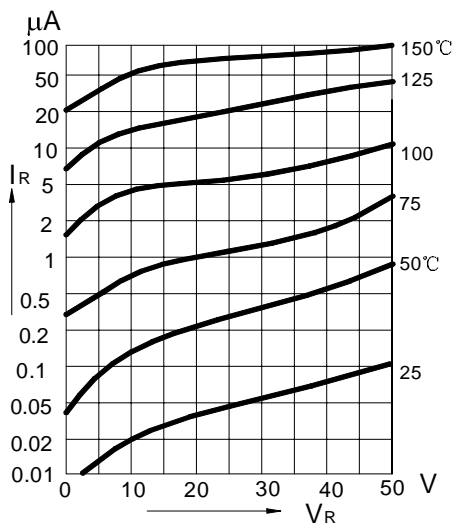


FIG.4 – TYPICAL CAPACITANCE CURVE AS A JUNCTION OF REVERSE VOLTAGE

