SMALL SIGNAL SCHOTTKY DIODES

VOLTAGE RANGE: 40 -- 20 V
CURRENT: 400 mW

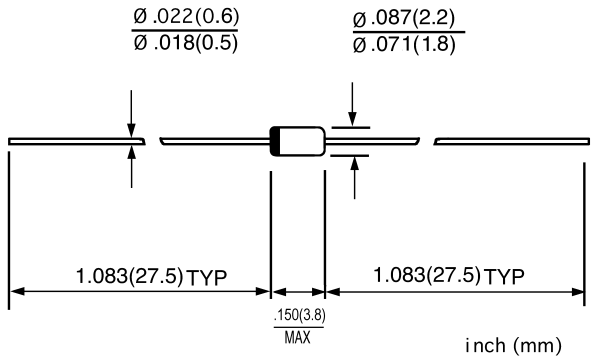
FEATURES

- ◇ 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 DO--35,glass case
- ◇ Polarity: Color band denotes cathode end
- ◇ Weight: Approx. 0.13 gram

DO - 35(GLASS)



ABSOLUTE RATINGS(LIMITING VALUES)

	Symbols	SD103A	SD103B	SD103C	UNITS
Peak reverse voltage	V_{RRM}	40	30	20	V
Power dissipation (Infinite Heat Sink)	P_{tot}		400[1)]		mW
Single cycle surge 60Hz sine wave	I_{FSM}		15		A
Forward continuous current	$I_{(AV)}$		350		mA
Junction tenperature	T_J		125		℃
Storage temperature range	T_{STG}		-55 ---+ 150		℃

1)Valid provided that leads at a distance of 4mm from case are kept at ambient temperature

ELECTRICAL CHARACTERISTICS

(Ratings at 25℃ ambient temperature unless otherwise specified)

	Symbols	Min.	Typ.	Max.	UNITS
Reverse breakdown voltage @ I_R=10μA SD103A SD103B SD103C	V_R	40 30 20	-	-	V
Leakage current @ V_R=50V SD103A,V_R=30V SD103B,V_R=20V SD103C,V_R=10V	I_R	-	-	5	μA
Forward voltage drop @ I_F=20mA I_F=200mA	V_F	-	-	0.37 0.6	V
Junction capacitance @ V_R=0V,f=1MHz	C_J	-	50	-	pF
Reverse recovery time @ I_F=I_R=50mA to 200mA,recover to 0.1 I_R	t_{rr}	-	10	-	ns
Thermal resistance junction to ambient air	$R_{\theta JA}$	-	250	-	K/W

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

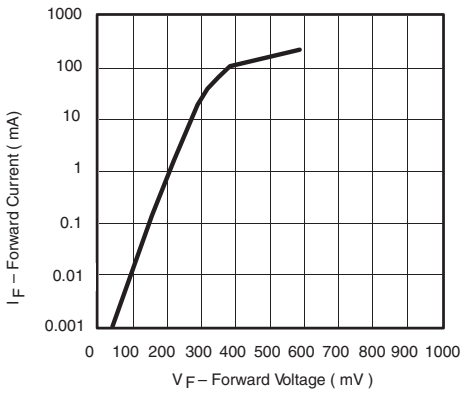

FIG.2 -- TYPICAL FORWARD CONDUCTION CURVE OF COMBINATION SCHOTTKY BARRIER AND PN JUNCTION GUARD RING

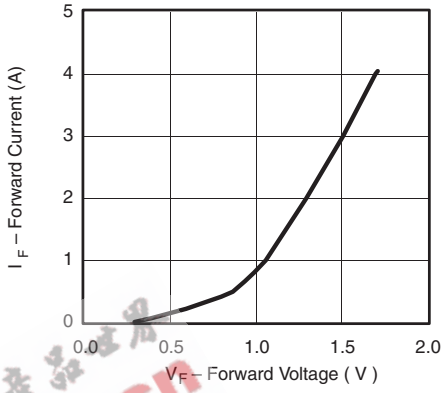

FIG.3 -- TYPICAL VARIATION OF REVERSE CURRENT AT VARIATION TEMPERATURES

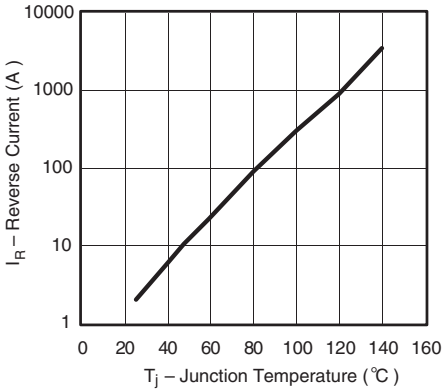

FIG.4 -- TYPICAL CAPACITANCE CURVE AS A JUNCTION OF REVERSE VOLTAGE