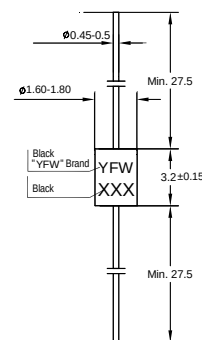


Silicon Schottky Barrier Diode

FEATURES

- ◆Metal silicon junction majority carrier conduction
- ◆High current capability, low forward voltage drop
- ◆Extremely low reverse current I_R
- ◆Ultra speed switching characteristics
- ◆Small temperature coefficient of forward characteristics
- ◆Satisfactory wave detection efficiency
- ◆For use in Recorder, Tv, Radio, Telephone as detectors, super high speed switching circuits, small current rectifier



Glass Case DO-35
Dimensions in mm

Absolute Ratings(Limiting values)

Parameter	Symbols	Value	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	45	V
Forward Continuous Current $T_A=25^{\circ}\text{C}$	I_F	50	mA
Peak forward surge current ($t=1\text{s}$)	I_{FSM}	500	mA
Operating junction temperature range	T_j	-55 to +125	$^{\circ}\text{C}$
Storage temperature range	T_{stg}	-55 to +125	$^{\circ}\text{C}$
Maximum lead temperature for soldering during 10s at 4mm from case	T_L	230	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS

Parameter	Symbols	Test Condition	Limits			Unit
			Min	Typ	Max	
Forward Voltage	V_F	$I_F=1.0\text{mA}$	-	0.24	0.5	V
		$I_F=200\text{mA}$	-	0.65	1.0	V
Reverse current	I_R	$V_R=15\text{V}$	-	0.5	1.0	μA
Junction capacitance	C_J	$V_R=10\text{V}$ $f=1\text{MHz}$	-	6.0	-	pF
Detection efficiency (See FIG.4)	η	$V_i=3\text{V}$ $f=30\text{MHz}$ $C_L=10\text{pF}$ $R_L=3.8\text{K}\Omega$	-	60	-	%
Reverse recovery time	t_{rr}	$I_F=I_R=1\text{mA}$, $I_{rr}=1\text{mA}$ $R_C=100\Omega$	-	-	1.0	ns
Thermal resistance junction to ambient	$R_{\theta JA}$		-	400	-	$^{\circ}\text{C/W}$

Ratings AND Characteristic Curves

FIG.1 – FORWARD CURRENT VERSUS FORWARD VOLTAGE (TYPICAL VALUES)

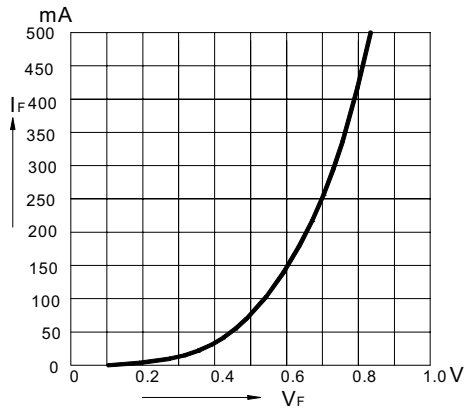


FIG.2 – REVERSE CURRENT VERSUS CONTINUOUS REVERSE VOLTAGE

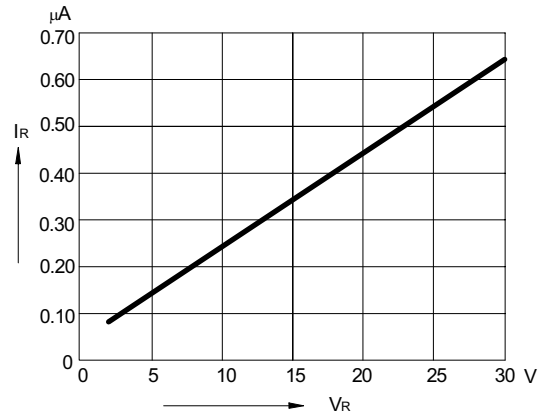


FIG.3 – JUNCTION CAPACITANCE VERSUS CONTINUOUS REVERSE APPLIED VOLTAGE

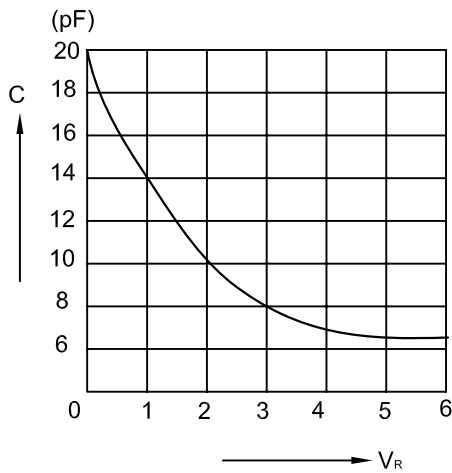
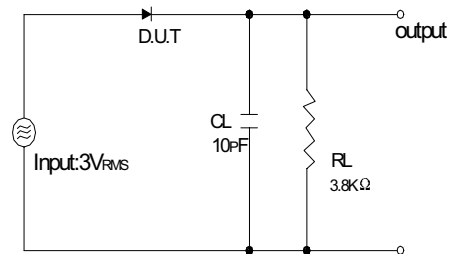


FIG.4 – DETECTION EFFICIENCY MEASUREMENT CIRCUIT



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