



SEMICONDUCTOR

1N60, 1N60P

SMALL SIGNAL SCHOTTKY DIODES

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FEATURES

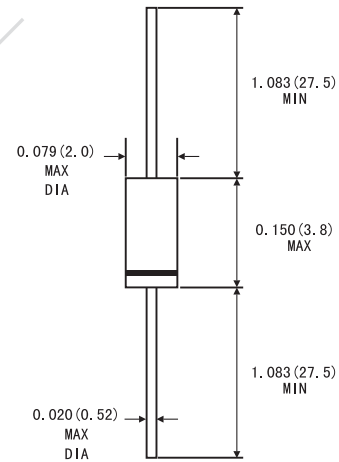
- Metal-on-silicon junction, majority carrier conduction
- High current capability, Low forward voltage drop
- Extremely low reverse current I_r
- Ultra speed switching characteristics
- Small temperature coefficient of forward characteristics
- Satisfactory Wave detection efficiency
- For use in RECORDER TV RADIO TELEPHONE as detectors, super high speed switching circuits, small current rectifier

MECHANICAL DATA

- Case: DO-35 glass case
- Polarity: color band denotes cathode end
- Weight: Approx. 0.13 gram



DO-35



Dimensions in inches and (millimeters)

ABSOLUTE RATINGS(LIMITING VALUES)

Symbols	Parameters	Value		Units
		1N60	1N60P	
V_{RRM}	Repetitive Peak Reverse Voltage	20	30	Volts
I_F	Forward Continuous Current	30	50	mA
	$T_A = 25^\circ\text{C}$			
I_{FSM}	Peak Forward Surge Current($t=1\text{S}$)	150	400	mA
T_{STG}/T_J	Storage and junction Temperature Range	-65 to +125		$^\circ\text{C}$
T_L	Maximum Lead Temperature for Soldering during 10S at 4mm from Case	230		$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS

Symbols	Parameters	Test Conditions	Value			Units
			Min.	Typ.	Max.	
V_F	Forward Voltage	$I_F = 1\text{mA}$	1N60	0.35	0.5	Volts
			1N60P	0.26	0.5	
		$I_F = 30\text{mA}$	1N60	0.70	1.0	
		$I_F = 200\text{mA}$	1N60P	0.70	1.0	
I_R	Reverse Current	$V_R = 15\text{V}$	1N60	1.0	5.0	μA
			1N60P	5.0	10.0	
C_J	Junction Capacitance	$V_R = 1\text{V}$ $f = 1\text{MHz}$	1N60	4.0		pF
		$V_R = 10\text{V}$ $f = 1\text{MHz}$	1N60P	10.0		
η	Detection Efficiency(See diagram 4)	$V_i = 3\text{V}$ $f = 30\text{MHz}$ $C_L = 10\text{pF}$ $R_L = 3.8\text{k}\Omega$		60		%
t_{rr}	Reverse Recovery time	$I_F = I_R = 1\text{mA}$ $I_{rr} = 1\text{mA}$ $R_C = 100\Omega$			1	ns
$R_{\theta JA}$	Junction Ambient Thermal Resistance			400		$^\circ\text{C/W}$

RATINGS AND CHARACTERISTIC CURVES 1N60

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

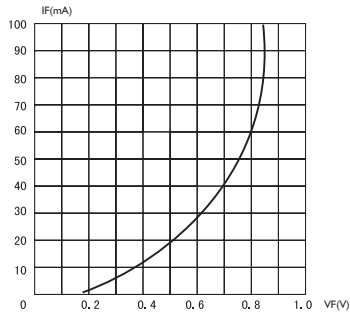


FIG.2-REVERSE CURRENT VERSUS CONTINUOUS REVERSE VOLTAGE

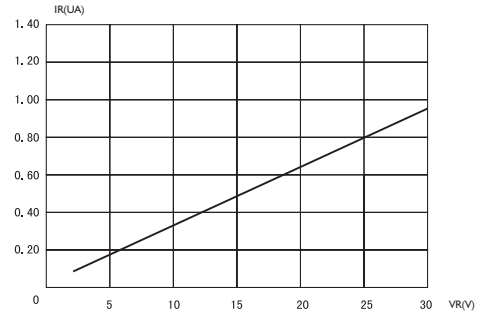


FIG.3-JUNCTION CAPACITANCE VERSUS CONTINUOUS REVERSE APPLIED VOLTAGE

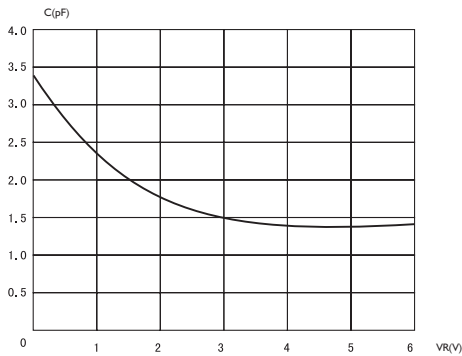
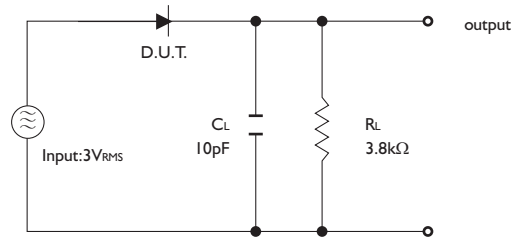


FIG.4-DETECTION EFFICIENCY MEASUREMENT CIRCUIT



RATINGS AND CHARACTERISTICS CURVES 1N60P

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

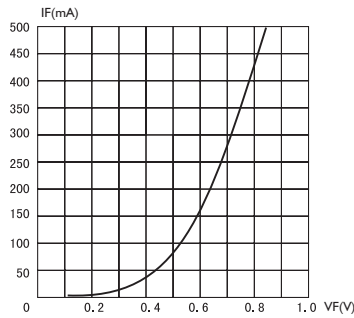


FIG.2-REVERSE CURRENT VERSUS CONTINUOUS REVERSE VOLTAGE

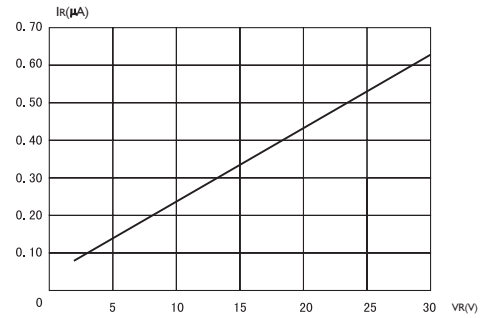


FIG.3-JUNCTION CAPACITANCE VERSUS CONTINUOUS REVERSE APPLIED VOLTAGE

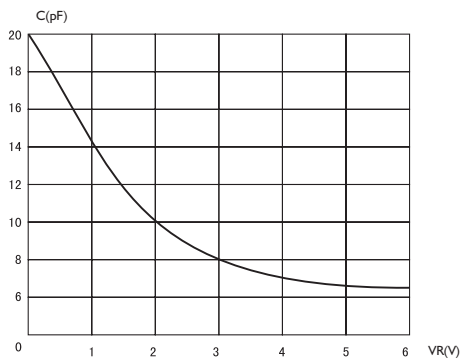


FIG.4-DETECTION EFFICIENCY MEASUREMENT CIRCUIT

