

SCHOTTKY BARRIER RECTIFIER

Features

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Metal silicon junction, majority carrier conduction
- ◆ Low power loss, high efficiency
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed: 250°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

Mechanical Data

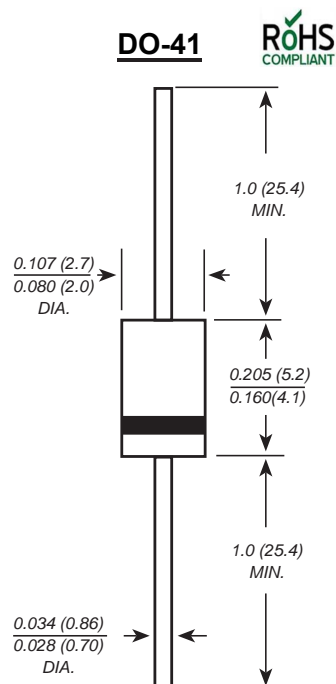
Case : JEDEC DO-41 Molded plastic body

Terminals : Solder plated, solderable per MIL-STD-750, Method 2026

Polarity : Color band denotes cathode end

Mounting Position : Any

Weight : 0.012 ounce, 0.33 grams



Dimensions in inches and (millimeters)

Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

Parameter	SYMBOLS	SR	SR	SR	SR	SR	SR	SR	SR	SR	SR	SR	UNITS	
		120	130	140	150	160	170	180	190	1100	1150	1200		
Marking Code		MDD SR 120	MDD SR 130	MDD SR 140	MDD SR 150	MDD SR 160	MDD SR 170	MDD SR 180	MDD SR 190	MDD SR 1100	MDD SR 1150	MDD SR 1200		
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	50	60	70	80	90	100	150	200	V	
Maximum RMS voltage	V_{RMS}	14	21	28	35	42	49	56	63	70	105	140	V	
Maximum DC blocking voltage	V_{DC}	20	30	40	50	60	70	80	90	100	150	200	V	
Maximum average forward rectified current 0.375" (9.5mm) lead length (see fig.1)	$I_{(AV)}$	1.0											A	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	40											A	
Maximum instantaneous forward voltage at 1.0A	V_F	0.55		0.70			0.85			0.95			V	
Maximum DC reverse current at rated DC blocking voltage	I_R	0.5					0.2							mA
$T_A=25^\circ\text{C}$ $T_A=100^\circ\text{C}$		10.0			5.0			2.0						
Typical junction capacitance (NOTE 1)	C_J	110			80								pF	
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$	50.0											°C/W	
Operating junction and storage	T_J	-50 to +125					-50 to +150							°C
Storage temperature range	T_{STG}	-50 to +150											°C	

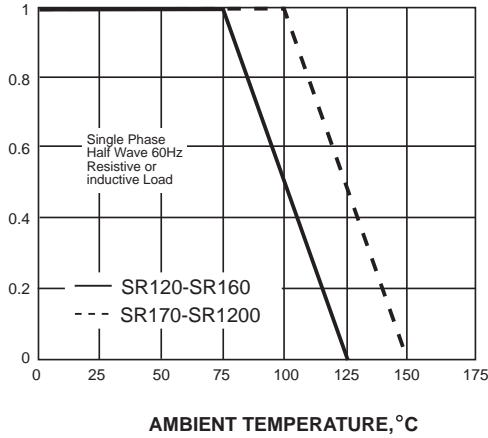
Note: 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

2. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

Ratings And Characteristic Curves

AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



PEAK FORWARD SURGE CURRENT, AMPERES

FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

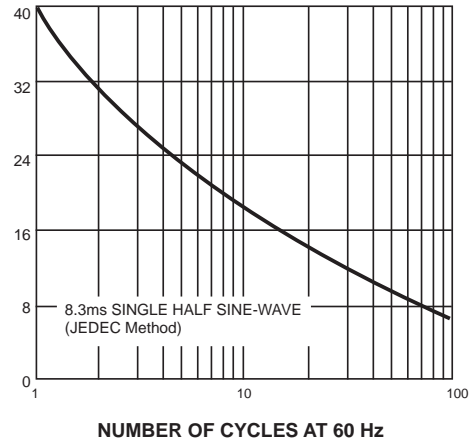
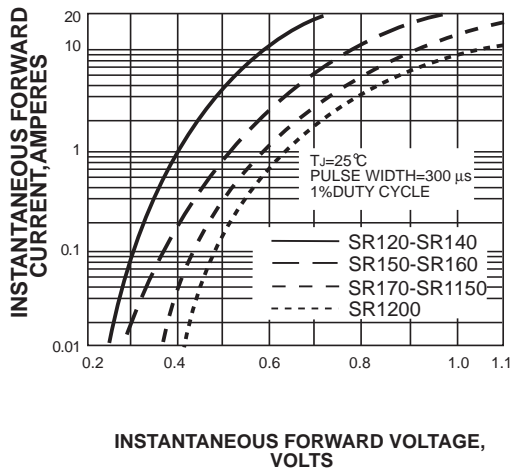


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



INSTANTANEOUS REVERSE CURRENT, MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS

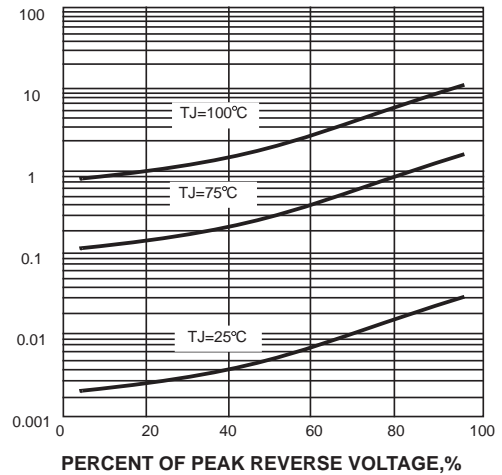
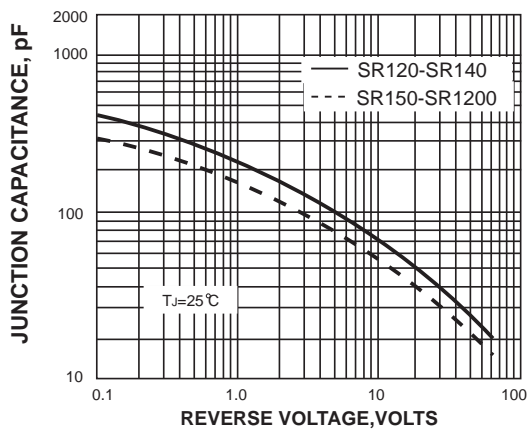
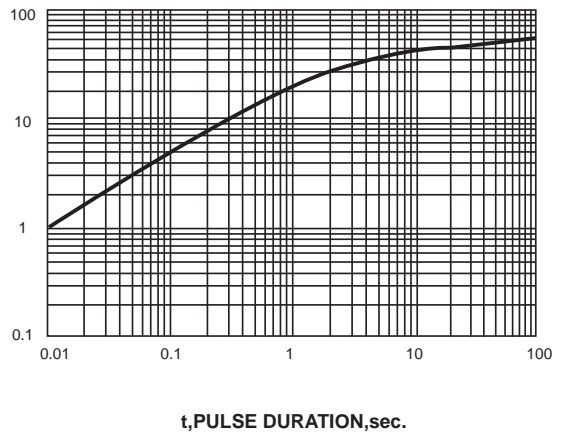


FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE, °C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



The curve above is for reference only.