

1N5817 THRU 1N5819

SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 20 to 40 Volts Forward Current - 1.0 Ampere

FEATURES

- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ Metal silicon junction, majority carrier conduction
- ◆ Guardring for overvoltage protection
- ◆ Low power loss, high efficiency
- ◆ Low forward voltage drop
- ◆ High temperature soldering guaranteed: 250°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3 kg) tension
- ◆ For glass DO-41 add "G" suffix and for glass MELF add "M" suffix

MECHANICAL DATA

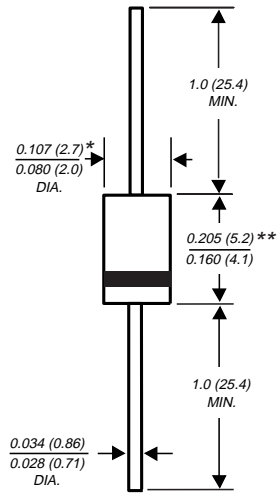
Case: JEDEC DO-204AL molded plastic body, glass body, or glass MELF body

Terminals: Plated leads, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end (band is green on MELF)

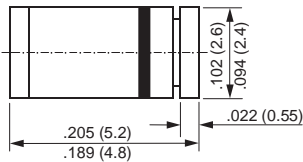
Weight: plastic body DO-41: 0.34 gram
glass body DO-41: 0.35 gram
glass MELF: 0.25 gram

DO-204AL
(DO-41)



Use "G" suffix
if glass body DO-41

Glass MELF



Use "M" suffix

Dimensions in inches and (millimeters)

*2.6 mm max. for glass DO-41

**4.1 mm max. for glass DO-41

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	1N5817	1N5818	1N5819	UNITS
* Maximum repetitive peak reverse voltage	V _{RRM}	20	30	40	Volts
Maximum RMS voltage	V _{RMS}	14	21	28	Volts
* Maximum DC blocking voltage	V _{DC}	20	30	40	Volts
* Maximum non-repetitive peak reverse voltage	V _{RSM}	24	36	48	Volts
* Maximum average forward rectified current 0.375" (9.5mm) lead length at T _L =90°C	I _(AV)	1.0			Amp
* Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) at T _L =70°C	I _{FSM}	25.0			Amps
* Maximum instantaneous forward voltage at 1.0A (NOTE 1)	V _F	0.450	0.550	0.600	Volts
* Maximum instantaneous forward voltage at 3.1A (NOTE 1)	V _F	0.750	0.875	0.900	Volts
* Maximum instantaneous reverse current at rated DC reverse voltage T _A =25°C (NOTE 1) T _A =100°C	I _R	1.0 10.0			mA
Typical thermal resistance (NOTE 2)	R _{θJA} R _{θJL}	50 15			°C/W
Typical junction capacitance (NOTE 3)	C _J	110			pF
* Storage and operating junction temperature range	T _J , T _{STG}	-65 to +125			°C

*JEDEC registered values

NOTES:

(1) Pulse test: 300µs pulse width, 1% duty cycle

(2) Thermal resistance from junction to lead, and/or to ambient P.C.B. mounted with 0.375" (9.5mm) lead length with 1.5 x 1.5" (38 x 38mm) copper pads

(3) Measured at 1.0 MHz and applied reverse voltage of 4.0 volts

RATINGS AND CHARACTERISTIC CURVES 1N5817 THRU 1N5819

FIG. 1 - FORWARD CURRENT DERATING CURVE

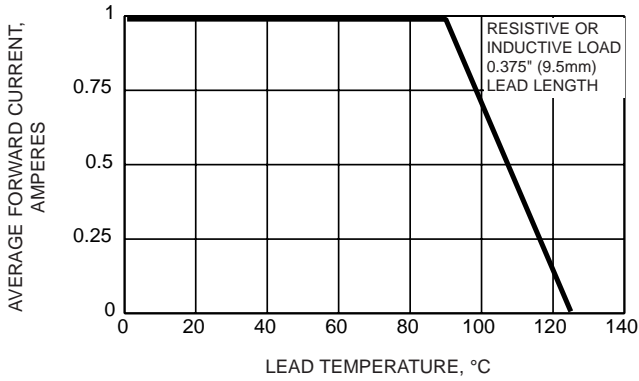


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

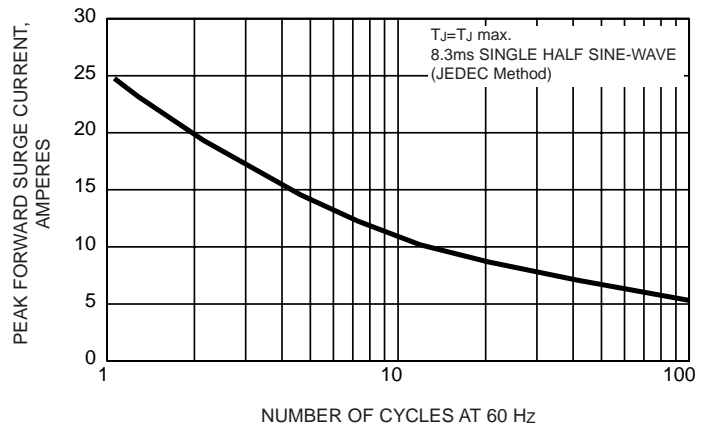


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

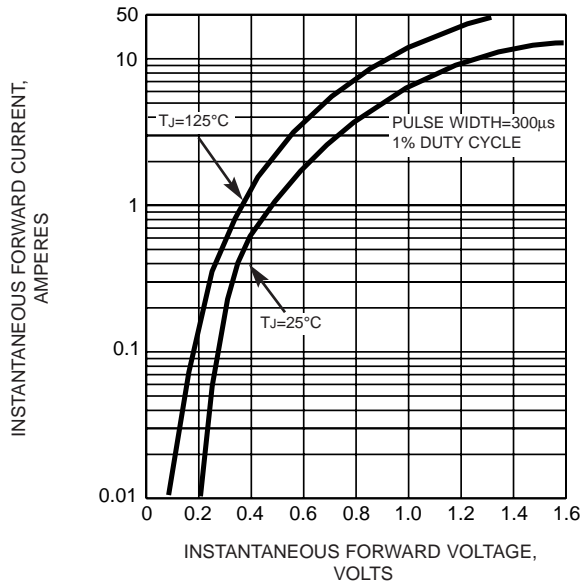


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

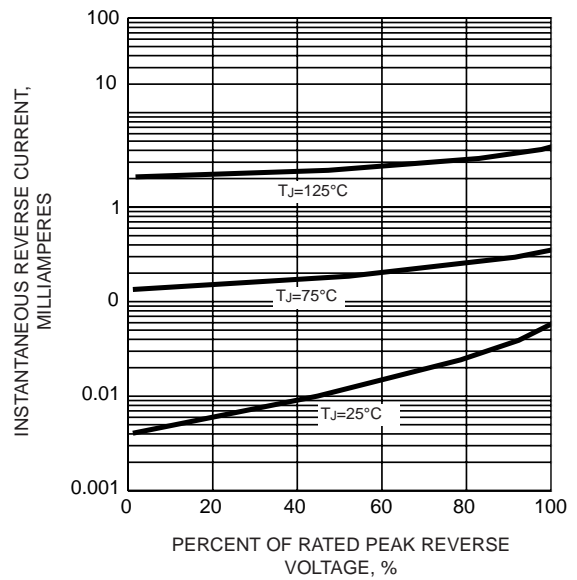


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

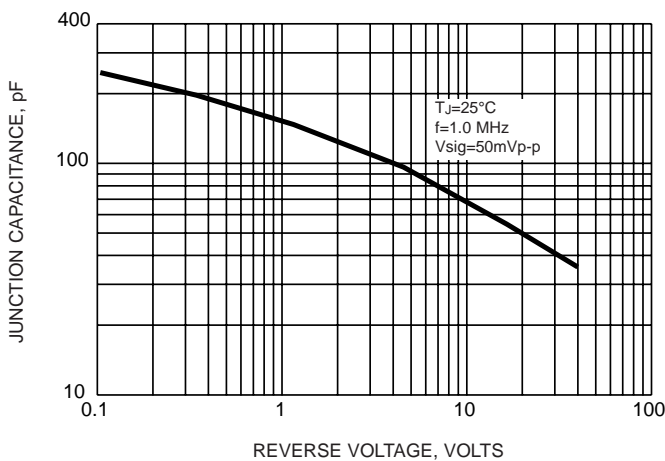


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE

