YUYUE

10SQ050

10.0 AMP SCHOTTKY BARRIER RECTIFIERS

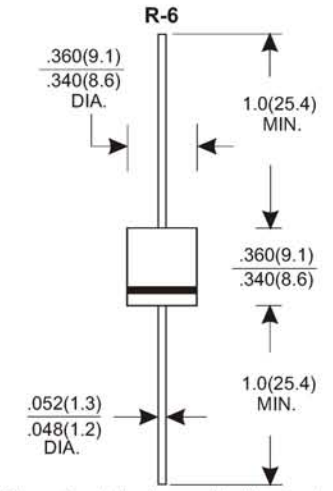
FEATURES

* Low forward voltage drop
* High current capability
* High reliability
* High surge current capability

MECHANICAL DATA

* Case: Molded plastic
* Epoxy: UL 94V-0 rate flame retardant
* Lead: Axial leads, solderable per MIL-STD-202, method 208 guranteed
* Polarity: Color band denotes cathode end
* Mounting position: Any
* Weight: 1.65 grams

VOLTAGE RANGE
50 Volts
CURRENT
10.0 Amperes



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25°C ambient temperature uniess otherwies specified.
Single phase half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

	Symbols	10SQ050	Units
Maximum repetitive peak reverse voltage	V_{RRM}	50	Volts
Maximum RMS voltage	V_{RMS}	35	Volts
Maximum DC blocking voltage	V_{DC}	50	Volts
Maximum average forward rectified current 0.375"(9.5mm) lead length(see fig.1)	$I_{(AV)}$	10.0	Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated T_L)	I_{FSM}	150.0	Amps
Maximum instantaneous forward voltage at 10.0 A(Note 1)	V_F	0.6	Volts
Maximum instantaneous reverse current at rated DC blocking voltage(Note 1) T_A=25°C	I_R	0.2	mA
Maximum instantaneous reverse current at rated DC blocking voltage(Note 1) T_A=100°C	I_R	50	mA
Typical junction capacitance(Note 3)	C_J	400	pF
Typical thermal resistance (Note 2)	$R_{\theta JC}$	2.5	°C/W
Operating junction temperature range at reduced reverse voltage V_R<=80%V_{RRM} V_R<=50%V_{RRM} in DC forward model	T_J	-65 to+150 -65 to+175 -65 to+200	°C
Storage temperature range	T_{STG}	-65 to+200	°C

Notes: 1.Pulse test: 300μs pulse width,1% duty cycle
2.Thermal resistance from junction to case
3.Measured at 1MHz and reverse voltage of 4.0 volts

RATING AND CHARACTERISTIC CURVES (10SQ050)

FIG.1-FORWARD CURRENT DERATING CURVE

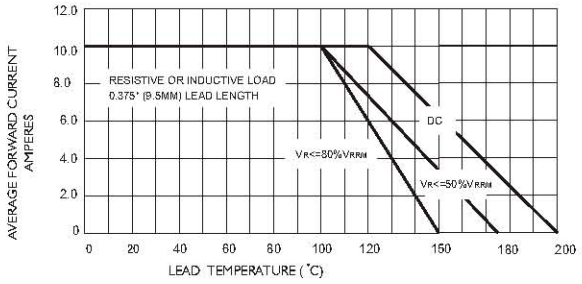


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

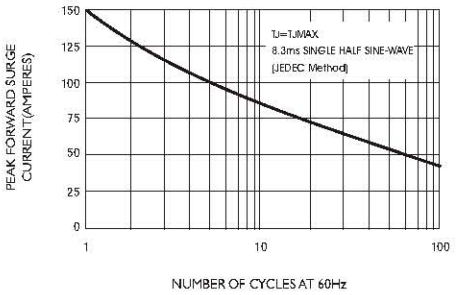


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

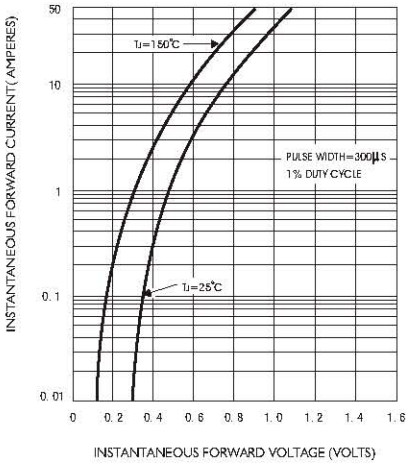


FIG.4-TYPICAL REVERSE CHARACTERISTICS

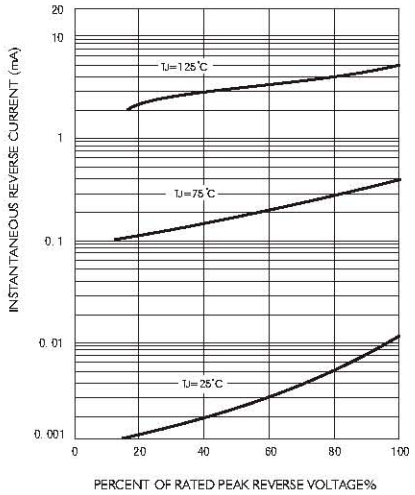


FIG.5-TYPICAL JUNCTION CAPACITANCE

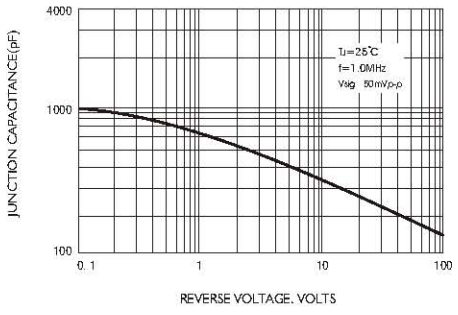
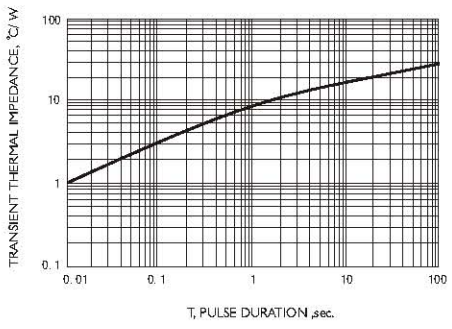


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE



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