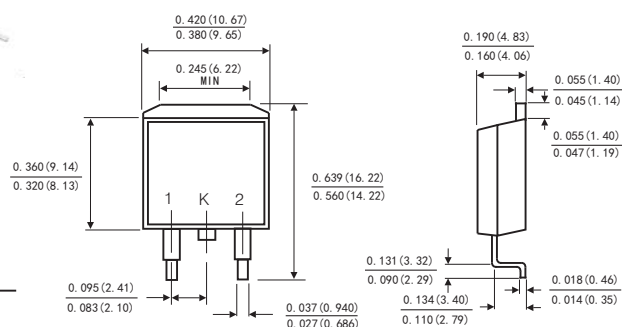


FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction ,majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss ,high efficiency
- High current capability ,Low forward voltage drop
- Single rectifier construction
- High surge capability
- For use in low voltage ,high frequency inverters, free wheeling ,and polarity protection applications
- High temperature soldering guaranteed:260°C/10 seconds, 0.25"(6.35mm)from case
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC



TO-263 D2PAK



MECHANICAL DATA

- Case: JEDEC TO-263 molded plastic body
- Terminals: Solderable per MIL-STD-202,method 208
- Polarity: As marked
- Mounting Position: Any
- Weight: 1.35 gram (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Ratings at 25°C ambient temperature unless otherwise specified ,Single phase ,half wave ,resistive or inductive load. For capacitive load,derate by 20%.)

	Symbols	SR 2045	Units	
Maximum repetitive peak reverse voltage	V_{RRM}	45	Volts	
Maximum RMS voltage	V_{RMS}	32	Volts	
Maximum DC blocking voltage	V_{DC}	45	Volts	
Maximum average forward rectified current See Fig. 1	$I(AV)$	20.0	Amps	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	300.0	Amps	
Maximum instantaneous forward voltage at 20.0 A	V_F	0.55	Volts	
Maximum instantaneous reverse current at rated DC blocking voltage(Note 1)	I_R	$T_c=25^\circ C$	150	μA
		$T_c=100^\circ C$	50	mA
Typical thermal resistance (Note 2)	$R_{\theta JC}$	1.5	$^\circ C/W$	
Storage temperature range	T_{STG}	-65 to +200	$^\circ C$	
Operating junction temperature range at reduced reverse voltage $V_R \leq 80\% V_{RRM}$ $V_R \leq 50\% V_{RRM}$ in DC forward model	T_J	$V_R \leq 80\% V_{RRM}$	-65 to +150	$^\circ C$
		$V_R \leq 50\% V_{RRM}$	-65 to +175	
			-65 to +200	

- Notes:** 1.Pulse test: 300 μs pulse width,1% duty cycle
2.Thermal resistance from junction to case

RATINGS AND CHARACTERISTIC CURVES SR2045

FIG.1-FORWARD CURRENT DERATING CURVE

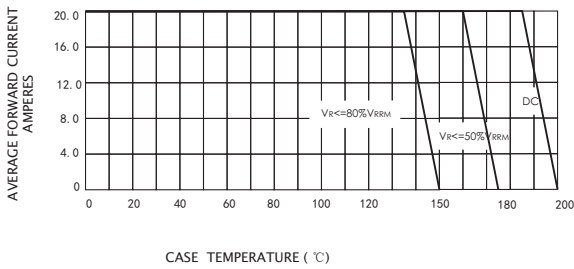


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

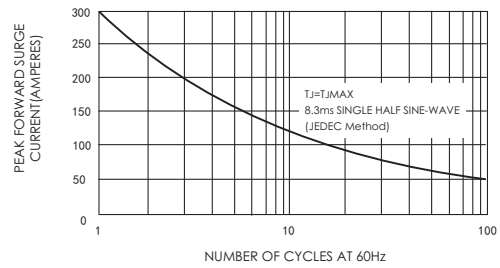


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

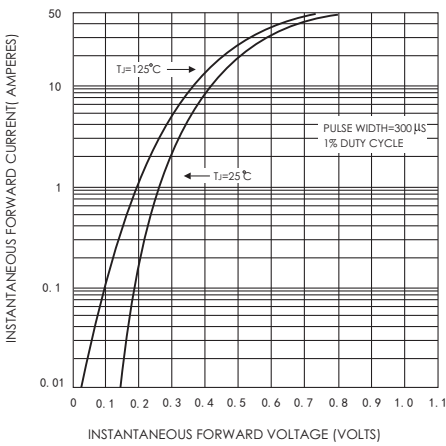


FIG.4-TYPICAL REVERSE CHARACTERISTICS

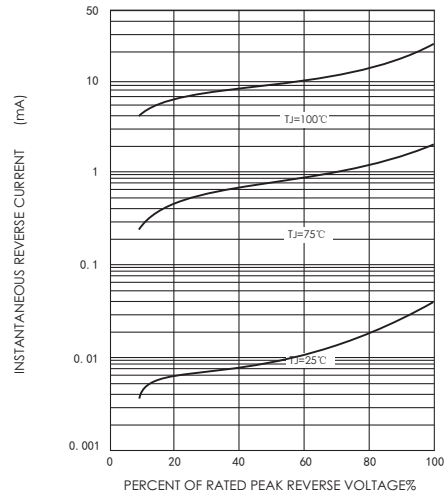


FIG.5-TYPICAL JUNCTION CAPACITANCE

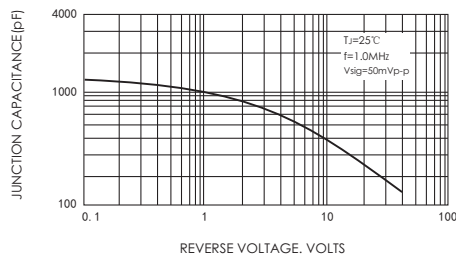


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE

