

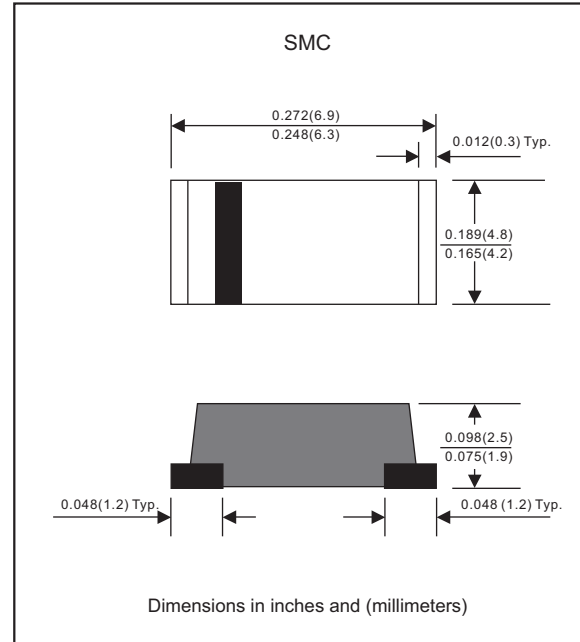
Features

- Batch process design, excellent power dissipation offers better reverse leakage current and thermal resistance
- Low profile surface mounted application in order to optimize board space
- Low power loss, high efficiency
- High current capability, low forward voltage drop
- High surge capability
- Guardring for overvoltage protection
- Ultra high-speed switching
- Silicon epitaxial planar chip, metal silicon junction
- Lead-free parts meet RoHS requirements
- Suffix "-H" indicates Halogen free parts, ex. AS320-H

Mechanical data

- Epoxy: UL94-V0 rated flame retardant
- Case : Molded plastic, DO-214AB / SMC
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : Indicated by cathode band
- Mounting Position : Any
- Weight : Approximated 0.19 gram

Package outline



Maximum ratings (AT $T_A=25^{\circ}\text{C}$ unless otherwise noted)

PARAMETER	SYMBOLS	AS 320	AS 330	AS 340	AS 350	AS 360	AS 380	AS 3100	AS 3150	AS 3200	UNIT	
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	50	60	80	100	150	200	V	
Maximum RMS voltage	V_{RMS}	14	21	28	35	42	56	70	105	140	V	
Maximum continuous reverse voltage	V_R	20	30	40	50	60	80	100	150	200	V	
Maximum average forward rectified current	I_O	3.0									A	
Non-repetitive peak forward surge current 8.3ms single half sine-wave	I_{FSM}	80									A	
Typical junction capacitance (Note 1)	C_J	250									pF	
Operating junction temperature range	T_J	-55 to +125				-55 to +150						$^{\circ}\text{C}$
Storage temperature range	T_{STG}	-65 to +175										$^{\circ}\text{C}$

Electrical characteristics (AT $T_A=25^{\circ}\text{C}$ unless otherwise noted)

PARAMETER	SYMBOLS	AS 320	AS 330	AS 340	AS 350	AS 360	AS 380	AS 3100	AS 3150	AS 3200	UNIT
Maximum instantaneous forward voltage at $I_F=3.0\text{A}$	V_F	0.475	0.50		0.70		0.85	0.90	0.92	V	
Maximum reverse leakage current at rated V_R	I_R					0.5					mA mA
						20					

Thermal characteristics

PARAMETER	SYMBOLS	AS 320	AS 330	AS 340	AS 350	AS 360	AS 380	AS 3100	AS 3150	AS 3200	UNIT	
Typical thermal resistance junction to ambient (Note2)	$R_{\theta JA}$						40					$^{\circ}\text{C/W}$
Typical thermal resistance junction to case (Note 2)	$R_{\theta JC}$						20					$^{\circ}\text{C/W}$

Notes1: Measured at 1MHz and applied reverse voltage of 4.0V D.C

2: Mounted on FR-4 PCB copper, minimum recommended pad layout

Rating and characteristic curves (AS320 THRU AS3200)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

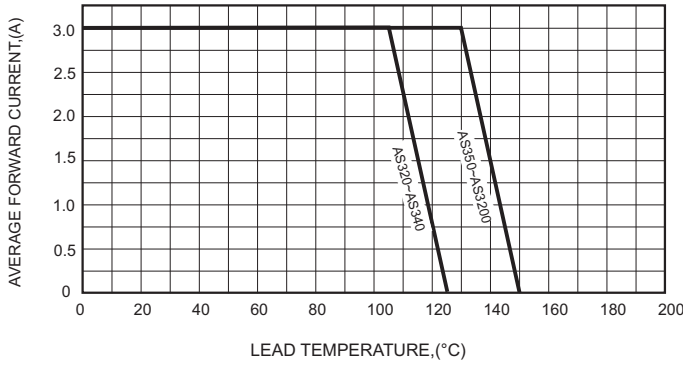


FIG.2-TYPICAL FORWARD CHARACTERISTICS

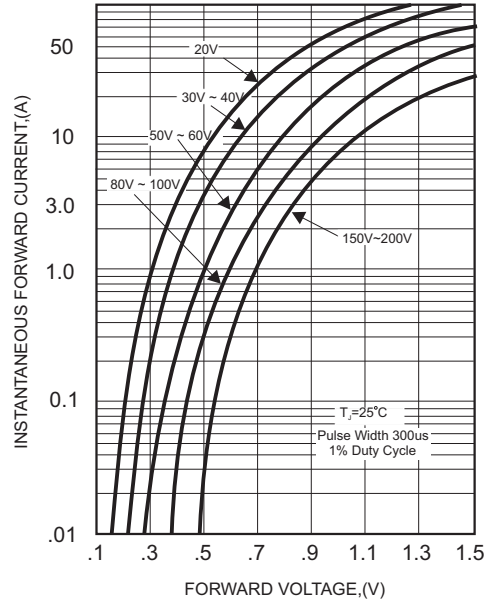


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

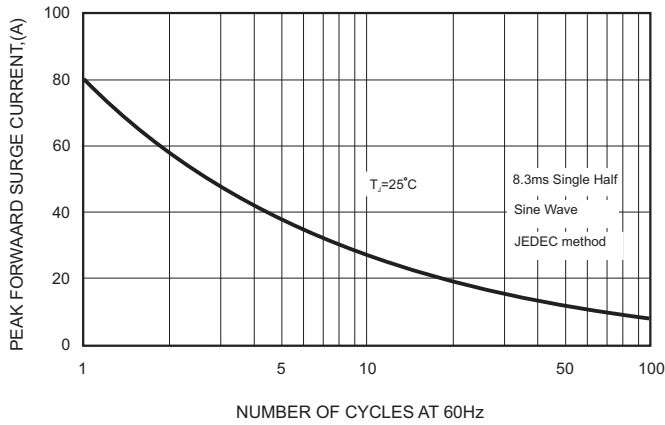


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

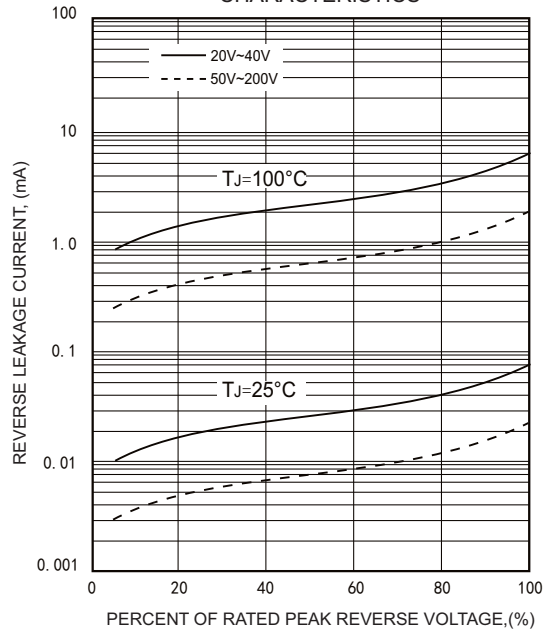
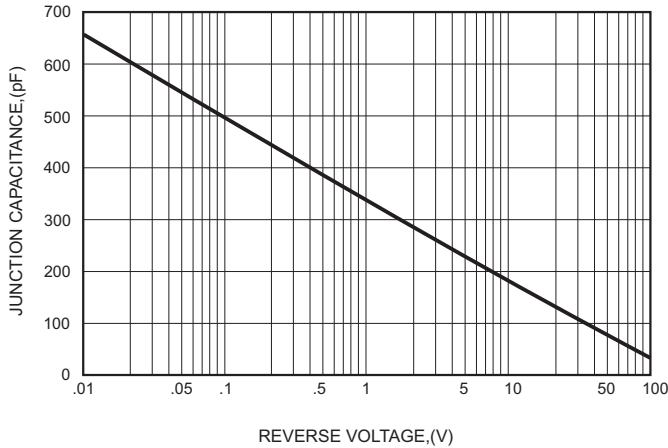




FIG.4-TYPICAL JUNCTION CAPACITANCE



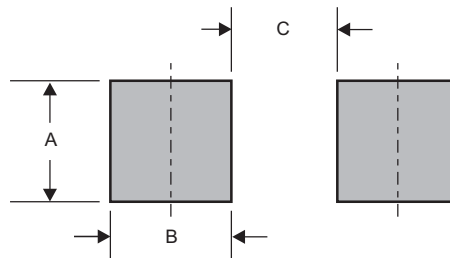
Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

Marking

Type number	Marking code
AS320	SK32
AS330	SK33
AS340	SK34
AS350	SS35
AS360	SS36
AS380	SS38
AS3100	S310
AS3150	S315
AS3200	S320

Suggested solder pad layout



Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SMC	0.189 (4.80)	0.063 (1.60)	0.158 (4.00)