

SURFACE MOUNT TRENCH SCHOTTKY RECTIFIER

Features

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ For surface mounted applications
- ◆ Metal silicon junction,majority carrier conduction
- ◆ Low power loss,high efficiency
- ◆ Built-in strain relief,ideal for automated placement
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed:
260°C/10 seconds at terminals

Mechanical Data

Case : JEDEC DO-214AC/SMA Molded plastic body

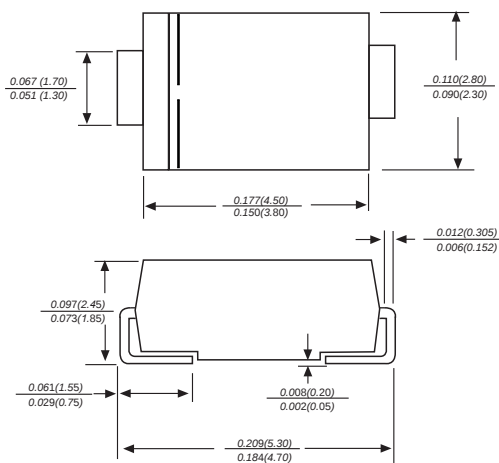
Terminals : Solder plated, solderable per MIL-STD-750,Method 2026

Polarity : Polarity symbol marking on body

Mounting Position : Any

Weight : 0.002ounce, 0.07 grams

DO-214AC/SMA



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%.

MDD Catalog Number	SYMBOLS	ST34	ST36	ST310	UNITS
Maximum repetitive peak reverse voltage	V _{RRM}	40	60	100	V
Maximum RMS voltage	V _{RMS}	28	42	70	V
Maximum DC blocking voltage	V _{DC}	40	60	100	V
Maximum average forward rectified current 0.375”(9.5mm) lead length(see fig.1)	I _(AV)	3.0			A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	80.0		100.0	A
Maximum instantaneous forward voltage at 3.0A	V _F	0.45	0.50	0.60	V
Maximum DC reverse current T _A =25 °C at rated DC blocking voltage T _A =100°C	I _R	0.30		0.10	mA
		5.0			
Typical junction capacitance (NOTE 1)	C _J	450	400	280	pF
Typical thermal resistance (NOTE 2)	R _{θJA}	60			°C/W
Operating junction temperature range	T _J	-55 to +125	-55 to +150		°C
Storage temperature range	T _{STG}	-55 to +150			°C

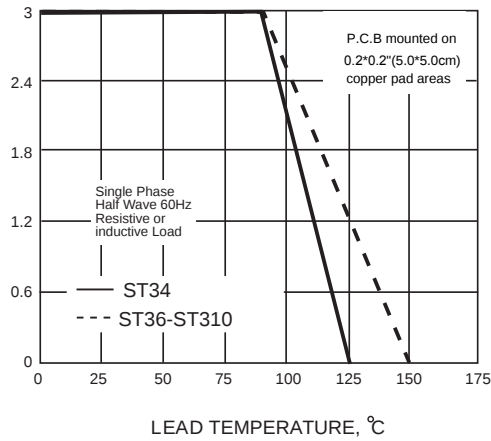
Note:1.Measured at 1MHz and applied reverse voltage of 4.0V D.C.

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

Ratings And Characteristic Curves

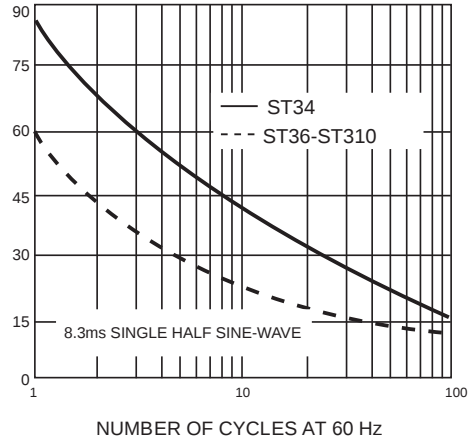
AVERAGE FORWARD RECTIFIED CURRENT,
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



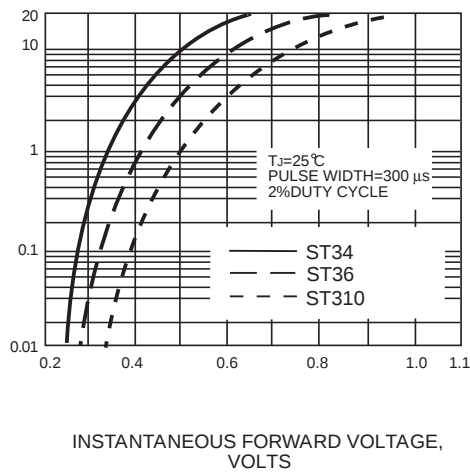
PEAK FORWARD SURGE CURRENT,
AMPERES

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



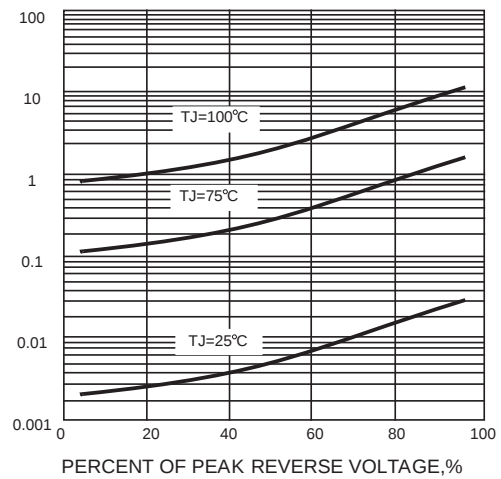
INSTANTANEOUS FORWARD
CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



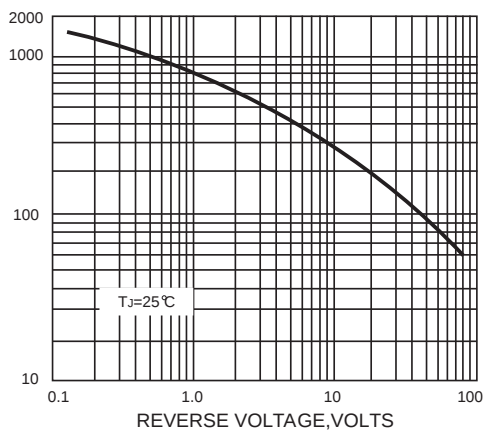
INSTANTANEOUS REVERSE CURRENT,
MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



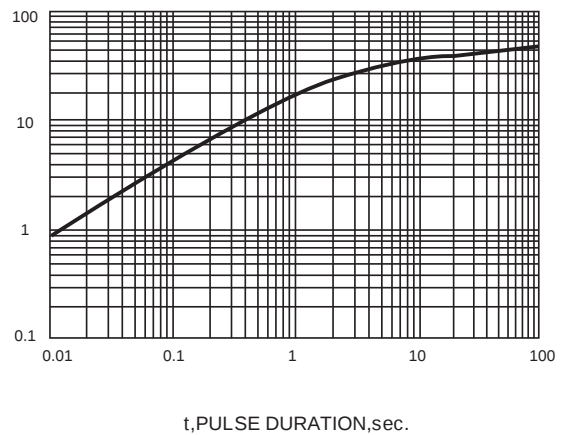
JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



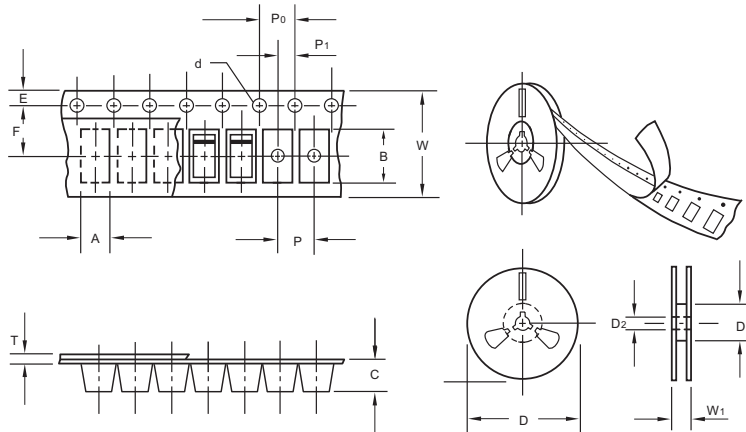
TRANSIENT THERMAL IMPEDANCE,
°C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



The curve above is for reference only.

Packing information



unit:mm

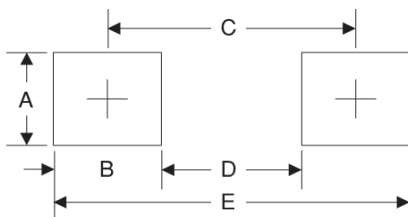
Item	Symbol	Tolerance	SMA
Carrier width	A	0.1	2.80
Carrier length	B	0.1	5.33
Carrier depth	C	0.1	2.36
Sprocket hole	d	0.05	1.50
13" Reel outside diameter	D	2.0	330.00
13" Reel inner diameter	D ₁	min	50.00
7" Reel outside diameter	D	2.0	178.00
7" Reel inner diameter	D ₁	min	62.00
Feed hole diameter	D ₂	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	5.50
Punch hole pitch	P	0.1	4.00
Sprocket hole pitch	P ₀	0.1	4.00
Embossment center	P ₁	0.1	2.00
Overall tape thickness	T	0.1	0.28
Tape width	W	0.3	12.00
Reel width	W ₁	1.0	18.00

Note: Devices are packed in accordance with EIA standard RS-481-A and specifications listed above.

Reel packing

PACKAGE	REEL SIZE	REEL (pcs)	COMPONENT SPACING (m/m)	BOX (pcs)	INNER BOX (m/m)	REEL DIA. (m/m)	CARTON SIZE (m/m)	CARTON (pcs)	APPROX. GROSS WEIGHT (kg)
SMA	7"	2,000	4.0	4,000	183*155*183	178	382*356*392	480,000	12.0
SMA	11"	5,000	4.0	10,000	290*290*38	330	310*310*360	80,000	11.0
SMA	13"	7,500	4.0	15,000	335*335*38	330	350*330*360	120,000	14.5

Suggested Pad Layout



Symbol	Unit (mm)	Unit (inch)
A	1.68	0.066
B	1.52	0.060
C	3.93	0.154
D	2.41	0.095
E	5.45	0.215