



ST540L THRU ST5100L

Reverse Voltage - 40 to 100 Volts Forward Current - 5.0 Ampere

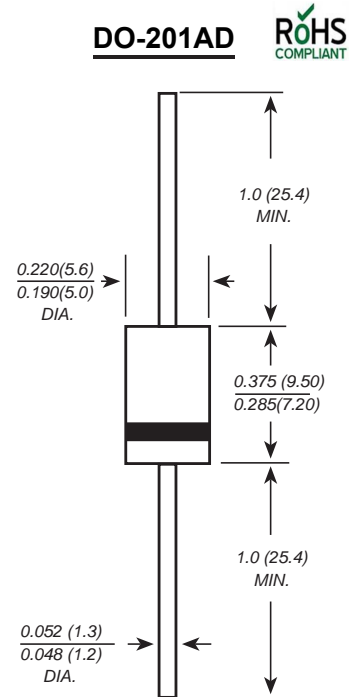
TRENCH SCHOTTKY RECTIFIER

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-201AD Molded plastic body
Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
Polarity : Polarity symbol marking on body
Mounting Position : Any
Weight : 0.04ounce, 1.10 grams



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%.

Parameter	SYMBOLS	ST540L	ST560L	ST510L	UNITS
		MDD ST540L	MDD ST560L	MDD ST5100L	
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 at TL (see fig. 1)	$I_{(AV)}$	5.0			A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	100	60.0	90.0	A
Maximum instantaneous forward voltage at 5.0A	V_F	0.43	0.50	0.60	V
Maximum DC reverse current $T_A=25^\circ C$ at rated DC blocking voltage $T_A=125^\circ C$	I_R	0.10	0.05	0.03	mA
		20.0		10.0	
Typical junction capacitance (NOTE 1)	CJ	500	400		pF
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$	25.0			°C/W
Operating junction temperature range	T_J	-55 to +125		-55 to +150	°C
Operating 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



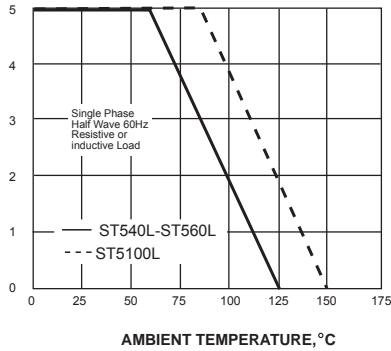
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Ratings And Characteristic Curves

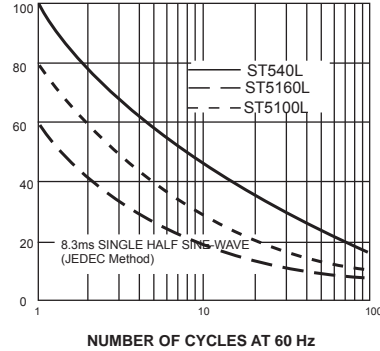
AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



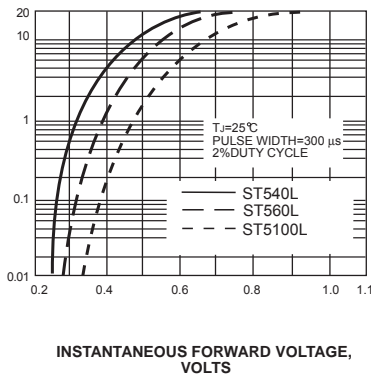
PEAK FORWARD SURGE CURRENT, AMPERES

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



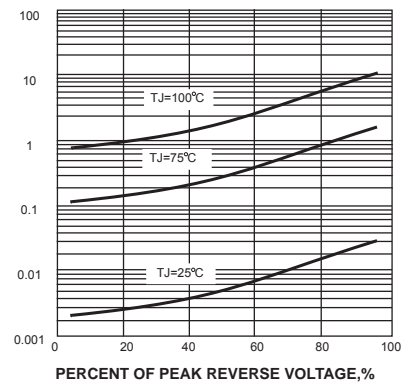
INSTANTANEOUS FORWARD CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



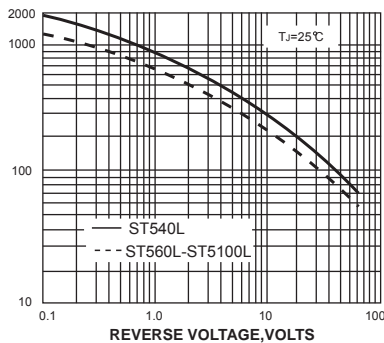
INSTANTANEOUS REVERSE CURRENT, MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



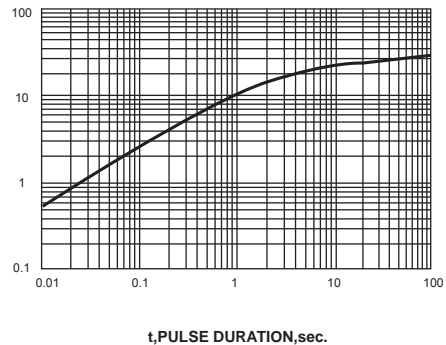
JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE, °C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



The curve above is for reference only.

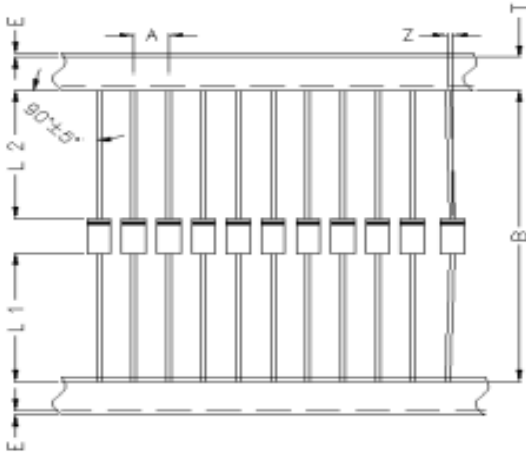


ST540L THRU ST5100L

Reverse Voltage - 40 to 100 Volts Forward Current - 3.0 Ampere

Package Information

Taping Specifications



Item	Symbol	Specifications(mm)
Component Pitch	A	10.0±0.5
Inner Tape Pitch	B	52.4±1.5
Component alignment	Z	1.2 Max
Tape width	T	6.0±0.5
Exposed adhesive	E	0.8 Max
Body eccentricity	L1-L2	1.0 Max

Ammunition Package Specifications

Package	Inner Box Size (mm)	QTY/Box (pcs)	Carton Size (mm)	Q'TY/Carton (pcs)
DO - 201AD	255*74*145	1000	410*275*340	10000

Bulk Package Specifications

Package	Inner Box Size (mm)	QTY/Box (pcs)	Carton Size (mm)	Q'TY/Carton (pcs)
DO - 201AD	198*86*21	200	460*220*250	10000