

General Purpose Silicon Rectifier

Features

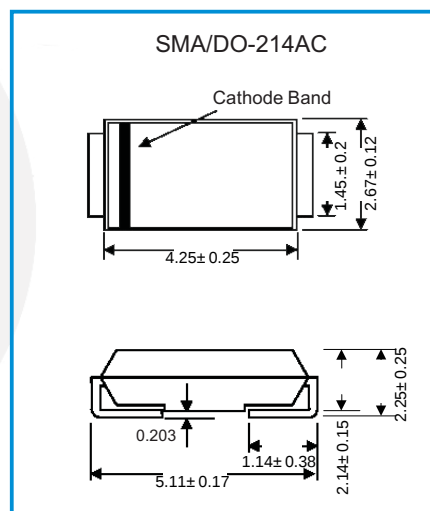
- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Construction utilizes void-free molded plastic technique
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed:
260°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension
- Marking : M520~M528



Mechanical Data

- **Case:** JEDEC DO-214AC molded plastic body
- **Terminals:** leads solderable per MIL-STD-750, Method 2026
- **Polarity:** Color band denotes cathode end
- **Mounting Position:** Any
- **Weight:** 0.012 ounce, 0.33 grams

Dimensions



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%.

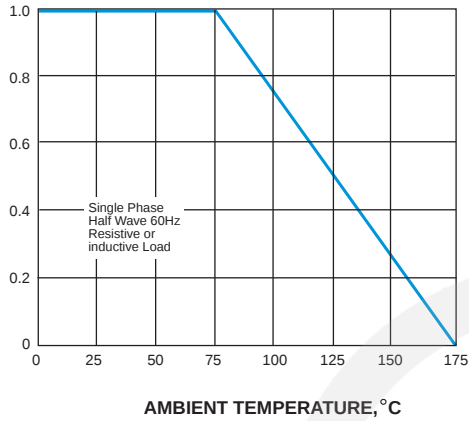
Rating	Symbols	LTM520A	LTM528A	Units
Maximum repetitive peak reverse voltage	V_{RRM}	2000	3000	VOLTS
Maximum RMS voltage	V_{RMS}	1400	2100	VOLTS
Maximum DC blocking voltage	V_{DC}	2000	3000	VOLTS
Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A=75^\circ\text{C}$	$I_{(AV)}$	1.0		Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30.0		Amps
Maximum instantaneous forward voltage at 1.0A	V_F	2.0		Volts
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=100^\circ\text{C}$	I_R	5.0 50.0		μA
Typical junction capacitance (NOTE 1)	C_J	15.0		pF
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$	50.0		$^\circ\text{C/W}$
Operating junction and storage temperature range	T_J, T_{STG}	-65 to +175		$^\circ\text{C}$

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 Characteristics Curves

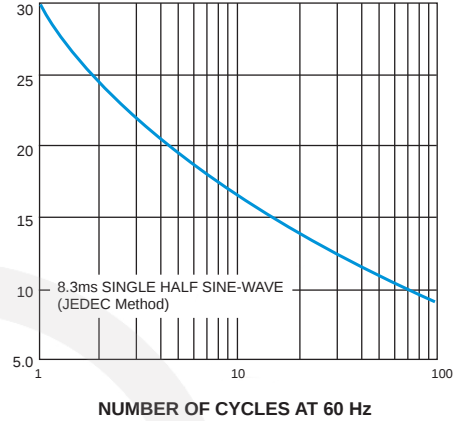
AVERAGE FORWARD RECTIFIED CURRENT,
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



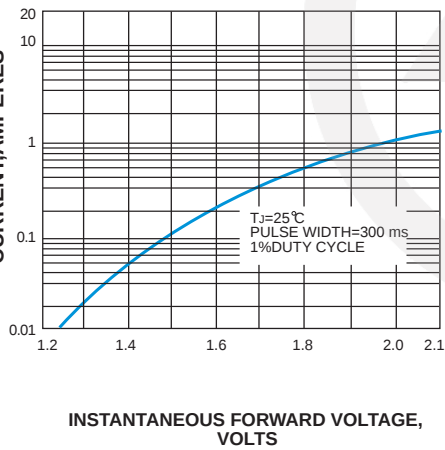
PEAK FORWARD SURGE CURRENT,
AMPERES

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



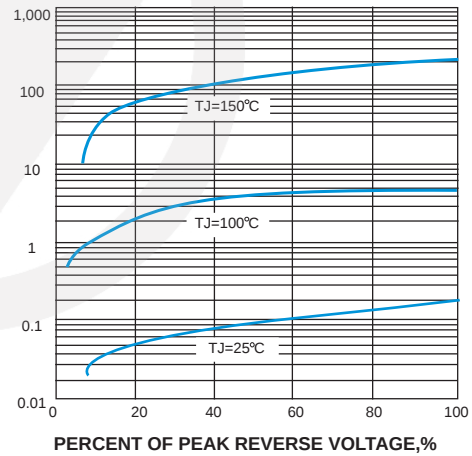
INSTANTANEOUS FORWARD
CURRENT,AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



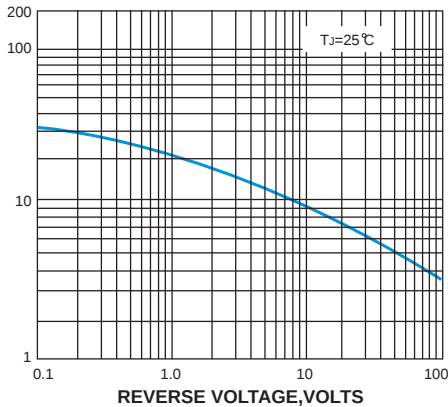
INSTANTANEOUS REVERSE CURRENT,
MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



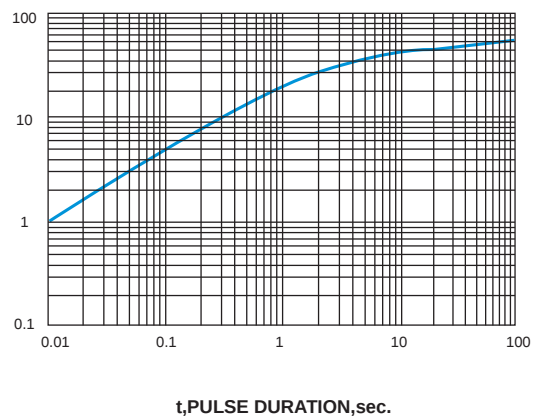
JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE

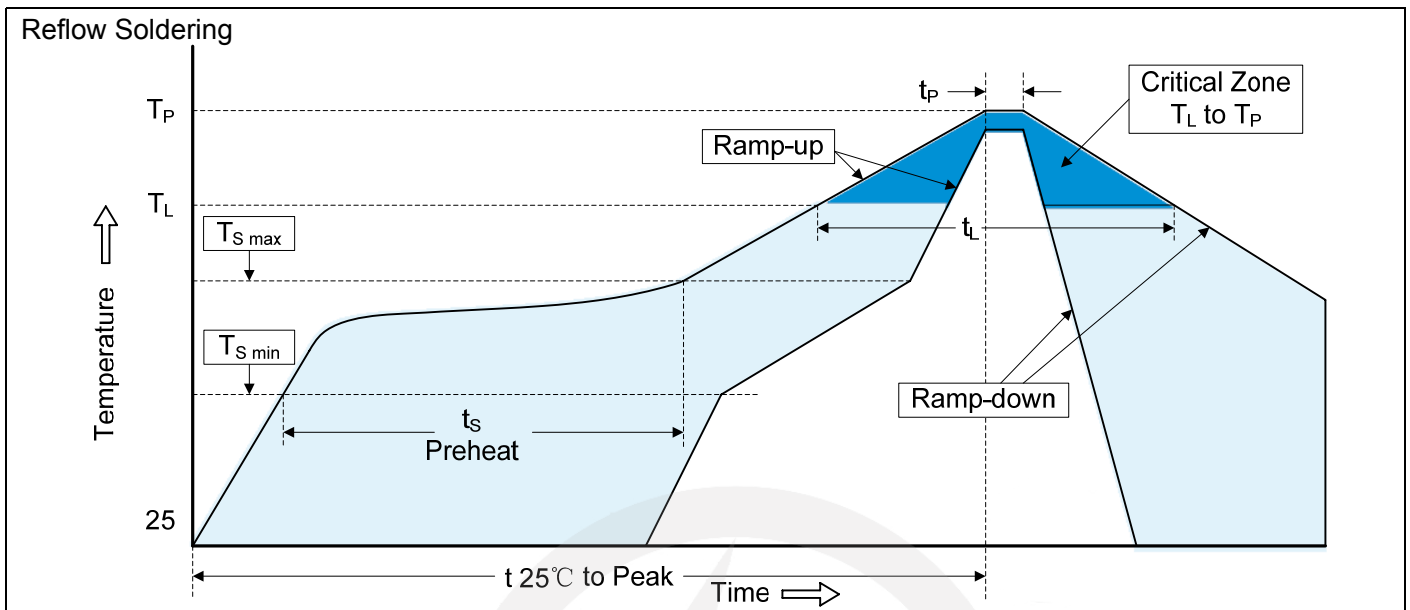


TRANSIENT THERMAL IMPEDANCE,
°C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



Recommended Soldering Conditions

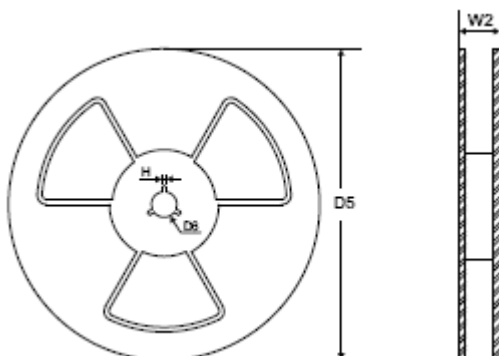


Recommended Conditions

Profile Feature	Pb-Free Assembly
Average ramp-up rate (T _L to T _P)	3°C/second max.
Preheat	
-Temperature Min (T _{S min})	150°C
-Temperature Max (T _{S max})	200°C
-Time (min to max) (t _s)	60-180 seconds
T _{S max} to T _L	
-Ramp-up Rate	3°C/second max.
Time maintained above:	
-Temperature (T _L)	217°C
-Time (t _L)	60-150 seconds
Peak Temperature (T _P)	260°C
Time within 5°C of actual Peak Temperature (t _P)	20-40 seconds
Ramp-down Rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max.

Packaging

13" Reel



D5 Φ330.0±2.0

D6 Φ13.5±0.5

H 2.5±1.0

W2 16.0±2.0

Quantity: 5000PCS