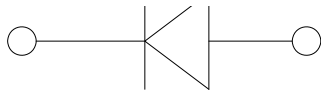
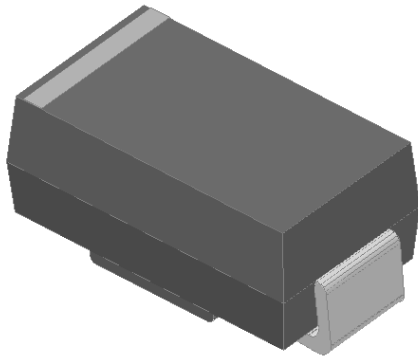


Surface Mount General Purpose Rectifier



Features

- Low profile package
- Ideal for automated placement
- Glass passivated chip junction
- High forward surge capability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C

Mechanical Data

- **Package:** DO-214AC (SMA)
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end

■Maximum Ratings (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	EMA520
Device marking code			EMA520
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	V	2000
Maximum RMS Voltage	V _{RMS}	V	1400
Maximum DC blocking Voltage	V _{DC}	V	2000
Average rectified output current @60Hz sine wave, Resistance load, TL (FIG.1)	I _O	A	2.0
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, T _j =25°C	I _{FSM}	A	30
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, T _j =25°C			60
Current squared time @1ms≤t≤8.3ms T _j =25°C, Rating of per diode	I ² t	A ² s	3.735
Typical junction capacitance @Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	C _j	pF	7
Storage temperature	T _{stg}	°C	-55 ~ +150
Junction temperature	T _j	°C	-55 ~ +150

■Electrical Characteristics (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	EMA520
Maximum instantaneous forward voltage drop per diode	V _F	V	I _{FM} =2A	1.3
Maximum DC reverse current at rated DC blocking voltage per diode	I _R	μA	T _j =25°C	5
			T _j =125°C	100



EMA520

■ Thermal Characteristics (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	EMA520
Typical Thermal Resistance	R _{θJ-A} ⁽¹⁾	°C/W	70
	R _{θJ-L} ⁽¹⁾		25
	R _{θJ-C} ⁽¹⁾		15

Note

(1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.2" x 0.2" (5.0 mm x 5.0 mm) copper pad areas

■ Ordering Information (Example)

PREFERRED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
EMA520	F1	Approximate 0.059	5000	10000	80000	13" reel
EMA520	F2	Approximate 0.059	7500	15000	120000	13" reel
EMA520	F3	Approximate 0.059	7500	15000	60000	13" reel
EMA520	F4	Approximate 0.059	1800	14400	57600	7" reel
EMA520	F5	Approximate 0.059	2000	16000	64000	7" reel
EMA520	F6	Approximate 0.059	5000	10000	100000	13" reel

■ Characteristics (Typical)

FIG.1: Io-TL Curve

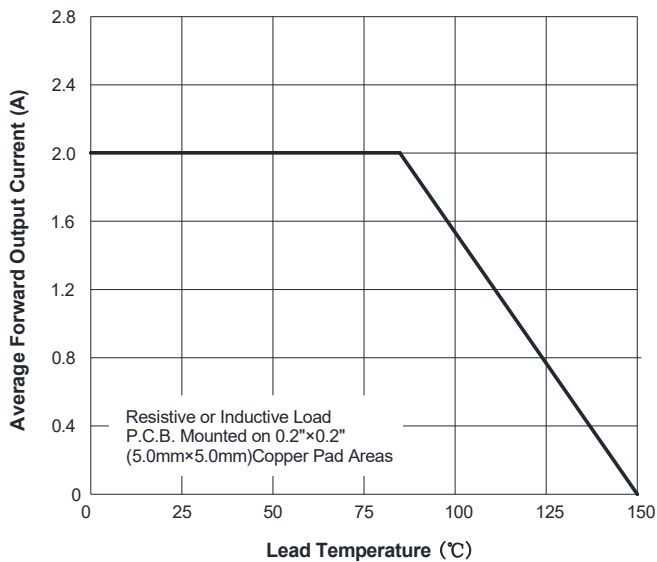


FIG.2: Forward Surge Current Capability

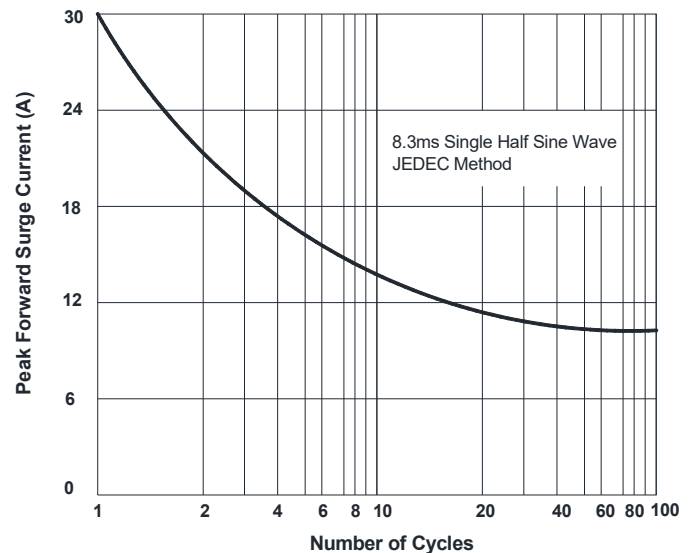


FIG.3: Typical Forward Voltage

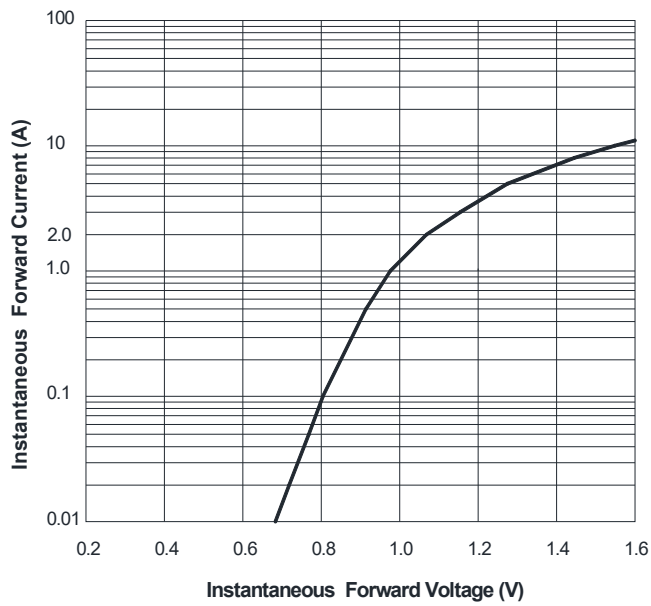
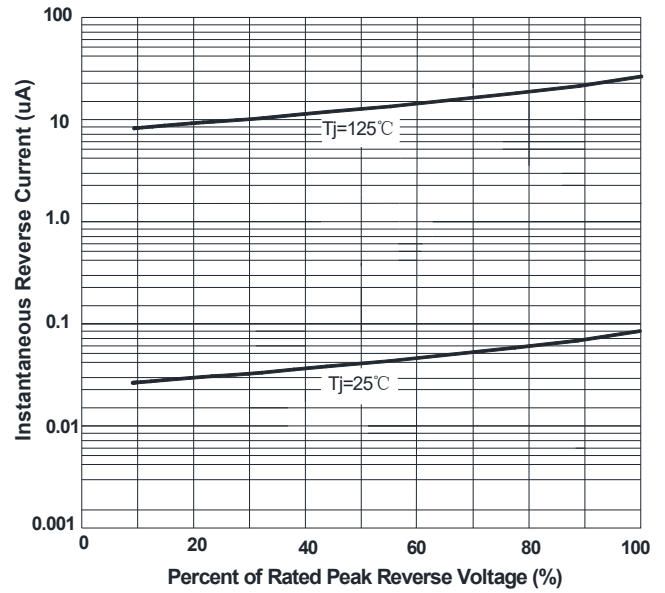
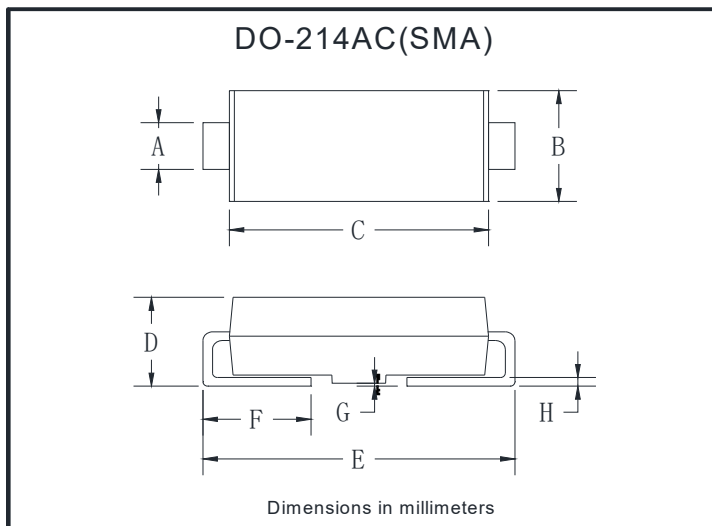


FIG.4: Typical Reverse Characteristics

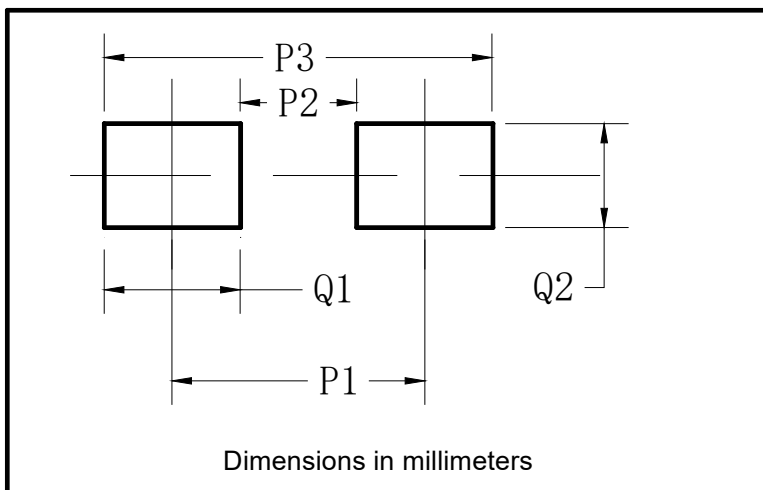


■ Outline Dimensions



DO-214AC(SMA)		
Dim	Min	Max
A	1.25	1.58
B	2.40	2.83
C	4.06	4.75
D	1.90	2.30
E	4.93	5.28
F	0.76	1.41
G	0.08	0.20
H	0.15	0.31

■ Suggested Pad Layout



DO-214AC(SMA)	
Dim	Millimeters
P1	4.00
P2	1.50
P3	6.50
Q1	2.50
Q2	1.70



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