

SMAG Plastic-Encapsulate Diodes

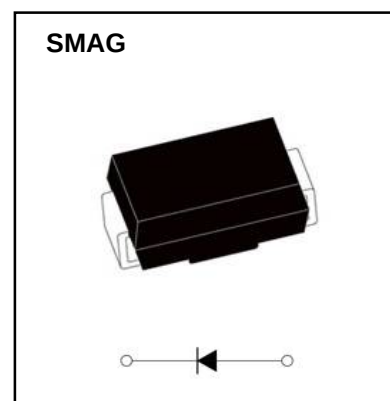
Schottky Rectifier

Features

- I_o 1A
- VRRM 20V-200V
- Low forward voltage drop
- High surge current capability
- Metal silicon junction, majority carrier conduction

Mechical Data

- Case: JEDEC DO-214AC molded plastic
- Molding compound: UL flammability classification rating 94V-0
- Terminals: Solder plated, solderable per MIL-STD-202, Method 208
- Polarity: Color band denotes cathode end



Limiting Values (Absolute Maximum Rating)

Item	Symbol	Unit	Test Conditions	SS 12	SS 13	SS 14	SS 15	SS 16	SS 18	SS 110	SS 115	SS 120
Repetitive Peak Reverse Voltage	V _{RRM}	V		20	30	40	50	60	80	100	150	200
Maximum RMS Voltage	V _{RMS}	V		14	21	28	35	42	56	70	105	140
Maximum DC Blocking Voltage	V _{DC}	V		20	30	40	50	60	80	100	150	200
Average Forward Current	I _{F(AV)}	A	60Hz Half-sine wave, Resistance load	1.0								
Surge(Non-repetitive)Forward Current	I _{FSM}	A	60Hz Half-sine wave ,1 cycle , Ta =25℃	30								
Junction Temperature	T _J	℃		-55~+125			-55~+150					
Storage Temperature	T _{STG}	℃		-55 ~ +150								

Electrical Characteristics ($T_a=25^{\circ}C$ Unless otherwise specified)

Item	Symbol	Unit	Test Condition		SS 12	SS 13	SS 14	SS 15	SS 16	SS 18	SS 110	SS 115	SS 120
Peak Forward Voltage	V _F	V	I _F =1.0A		0.55			0.70		0.85		0.95	
Peak Reverse Current	I _{RRM1}	mA	V _{RM} =V _{RRM}	T _a =25°C	0.5					0.1			
	T _a =100°C			10					5.0				
Thermal Resistance(Typical)	R _{θJA}	°C/W	Between junction and ambient		88								
	R _{θJL}		Between junction and terminal		28								
Juction Capacitance (Typical)	Cj	pF	Measured at 1.0MHz and applied reverse voltage of 4.0 volts.		40			30		26		20	

Notes:

Thermal resistance from junction to ambient and from junction to lead mounted on FR4 PCB double sided copper mini pad

Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

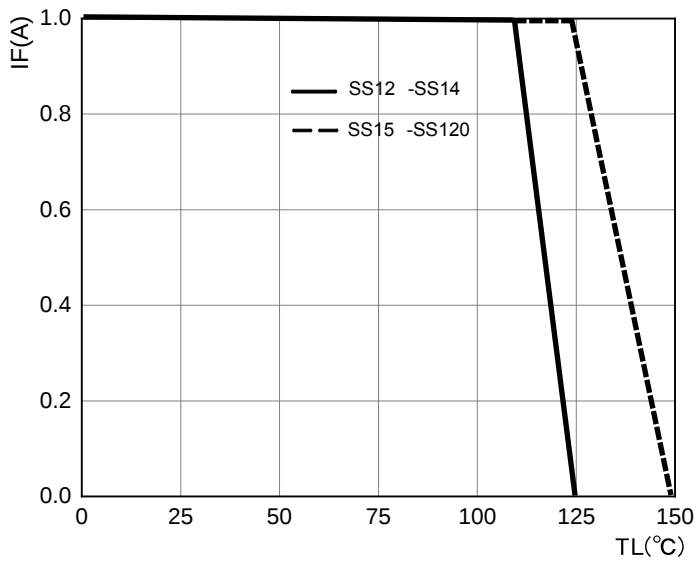
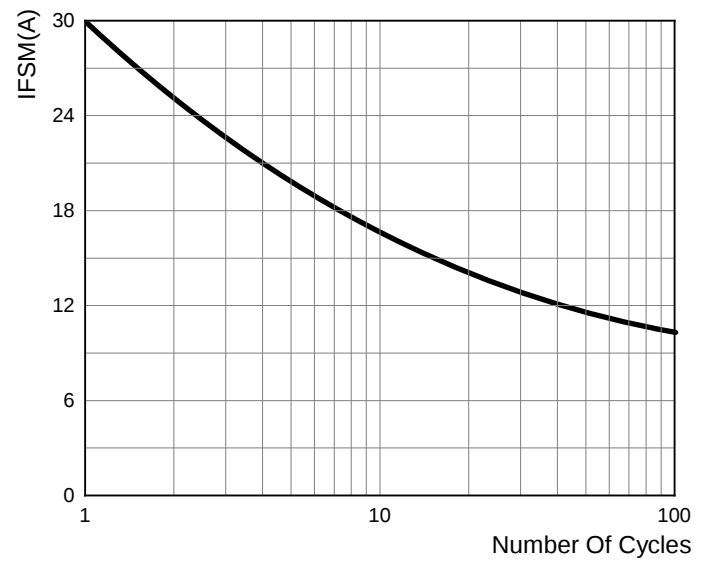
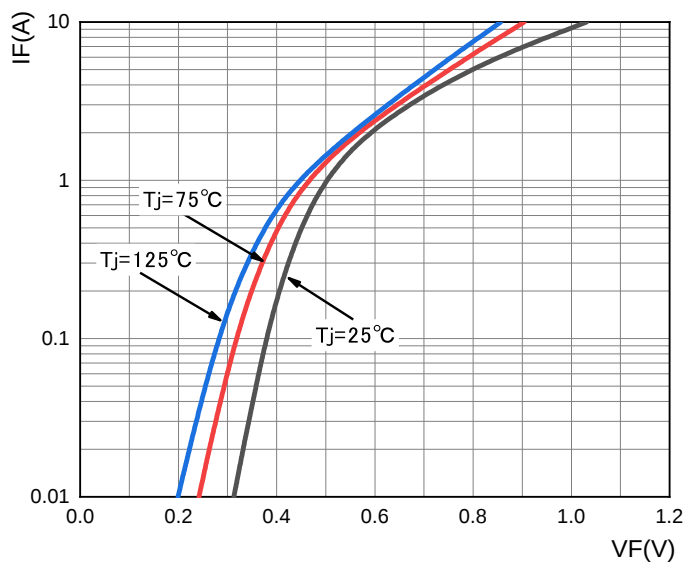


FIG 2: MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



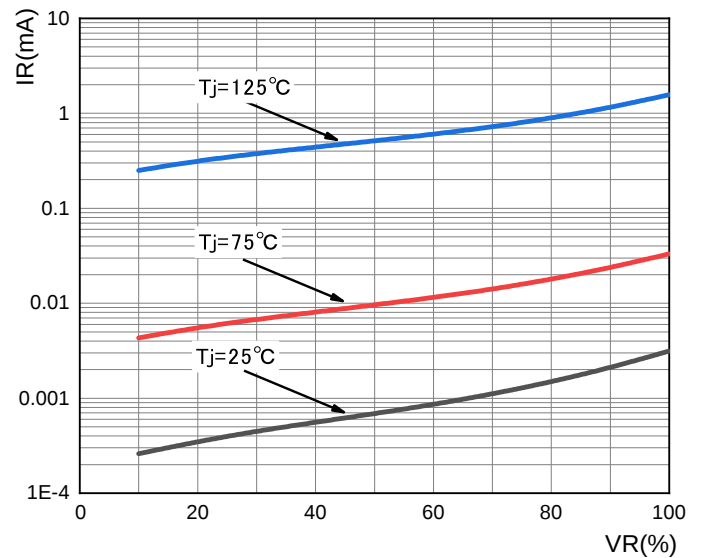
SS12-SS14

FIG.3: TYPICAL FORWARD CHARACTERISTICS



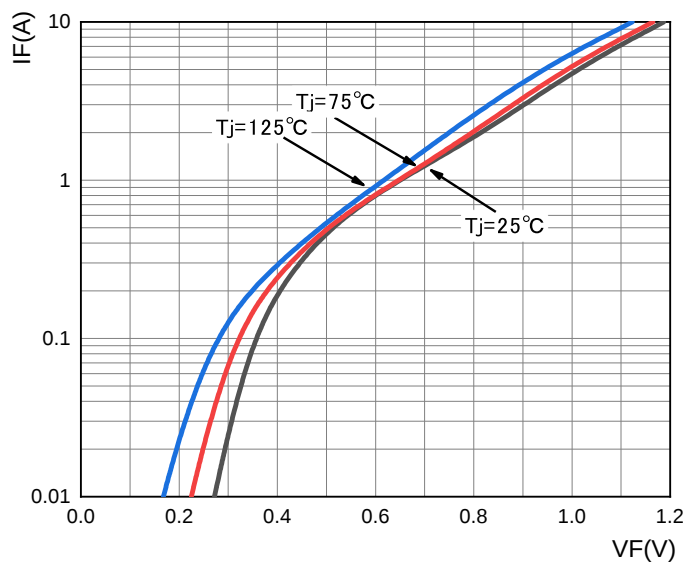
SS12-SS14

FIG.4: TYPICAL REVERSE CHARACTERISTICS



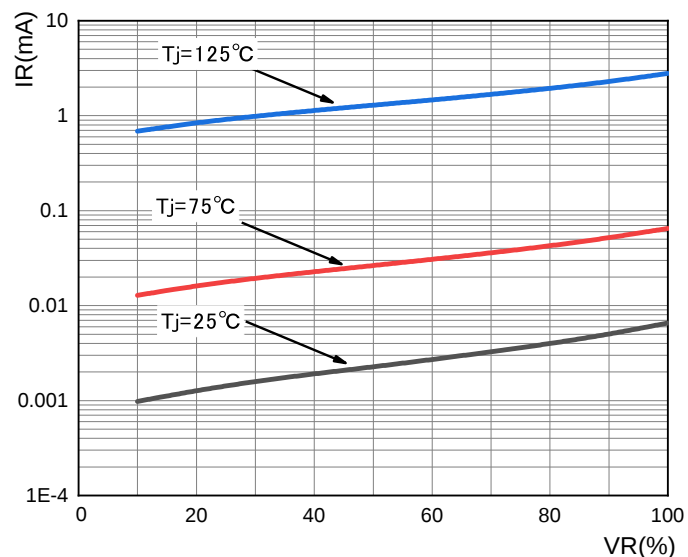
SS15-SS16

FIG.5: TYPICAL FORWARD CHARACTERISTICS



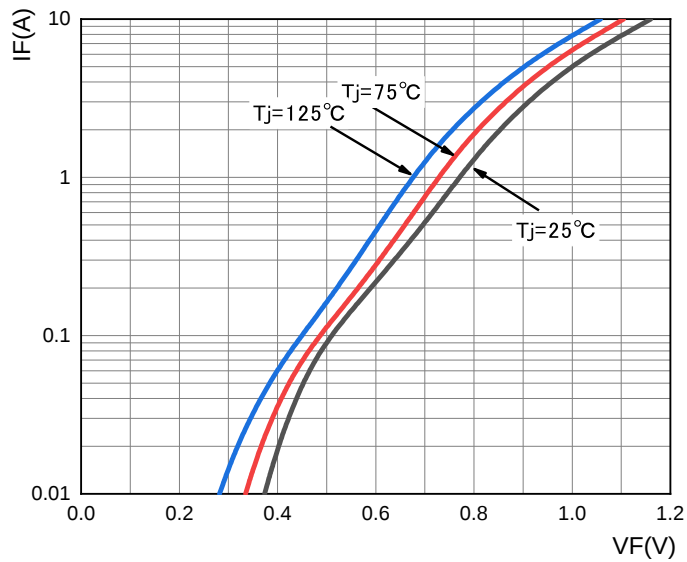
SS15-SS16

FIG.6: TYPICAL REVERSE CHARACTERISTICS



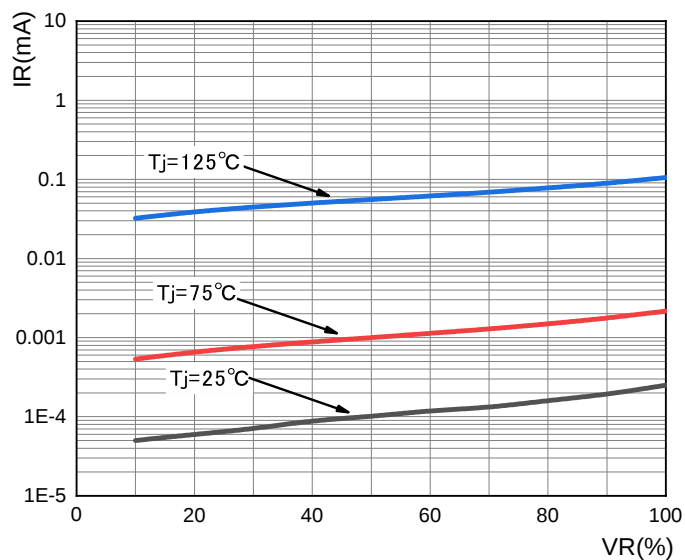
SS18-SS110

FIG.7: TYPICAL FORWARD CHARACTERISTICS



SS18-SS110

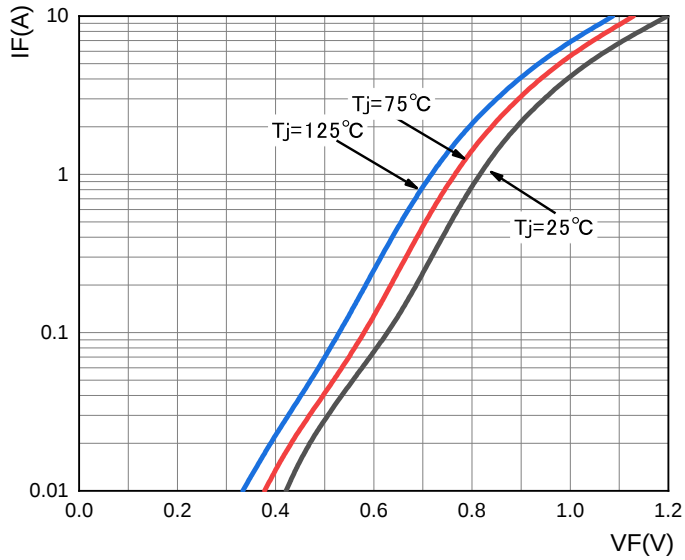
FIG.8: TYPICAL REVERSE CHARACTERISTICS



Typical Characteristics

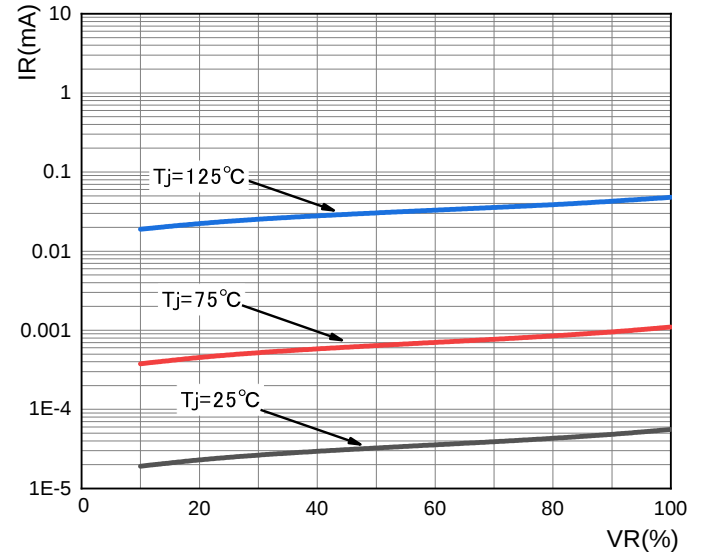
SS115

FIG.9: TYPICAL FORWARD CHARACTERISTICS



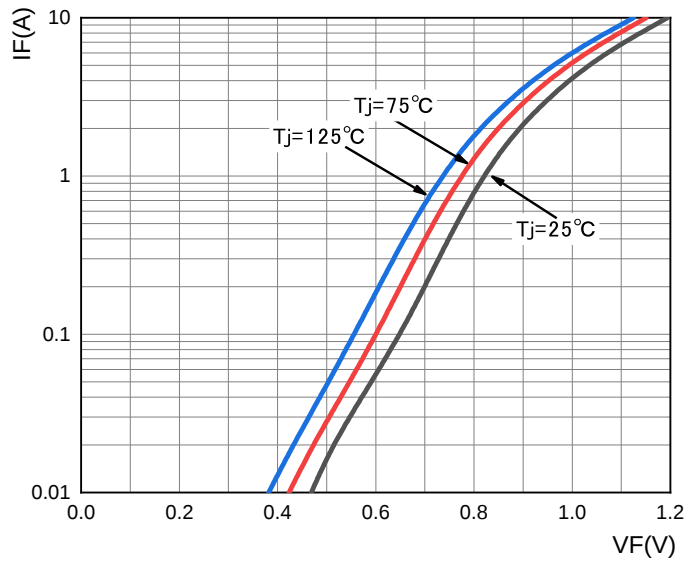
SS115

FIG.10: TYPICAL REVERSE CHARACTERISTICS



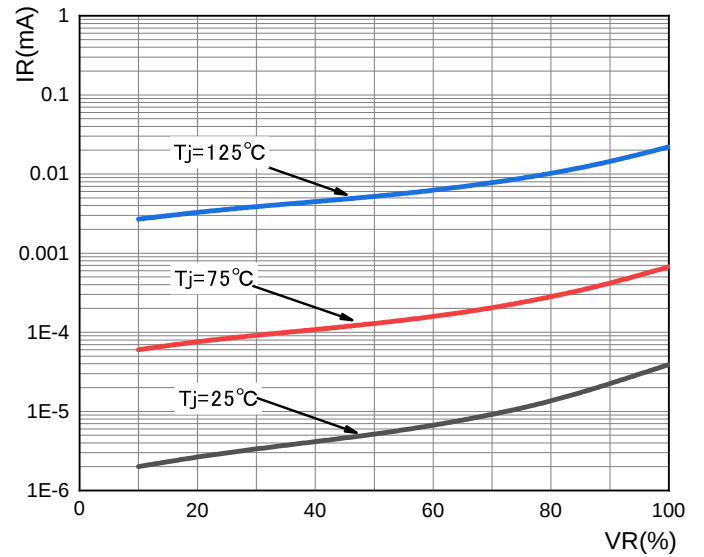
SS120

FIG.11: TYPICAL FORWARD CHARACTERISTICS

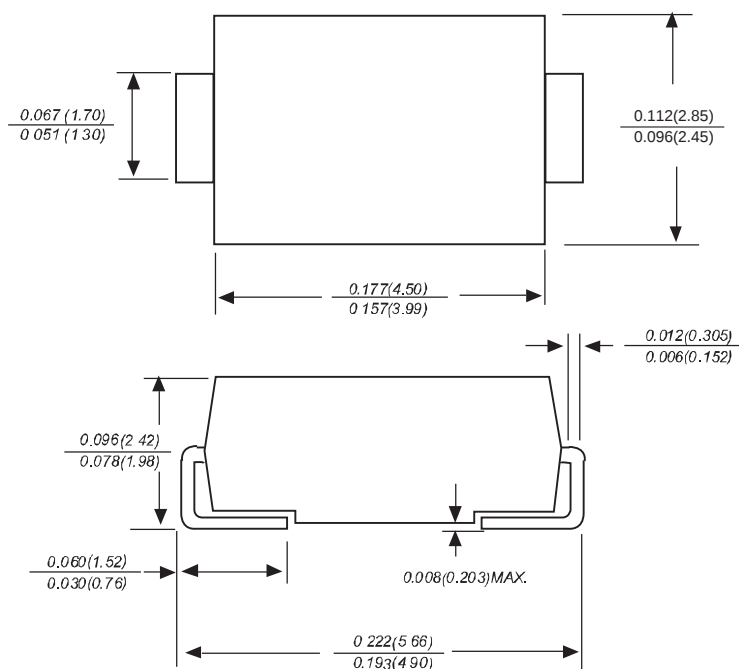


SS120

FIG.12: TYPICAL REVERSE CHARACTERISTICS

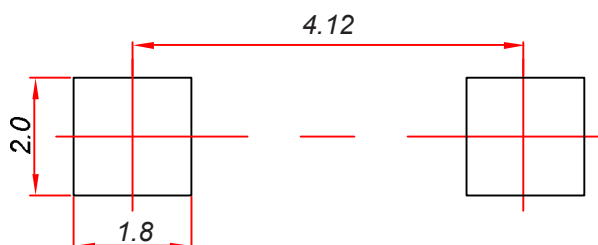


SMAG Package Outline Dimensions



Dimensions in inches and (millimeters)

SMAG Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: ± 0.05 mm.
3. The pad layout is for reference purposes only.

Ordering Information

Part Number	Package	Shipping Quantity
SS12-SS120	SMAG	5000/tape&Reel

Marking Diagram



X: From 2 To 20

Reel Taping Specifications For Surface Mount Devices- SMAG

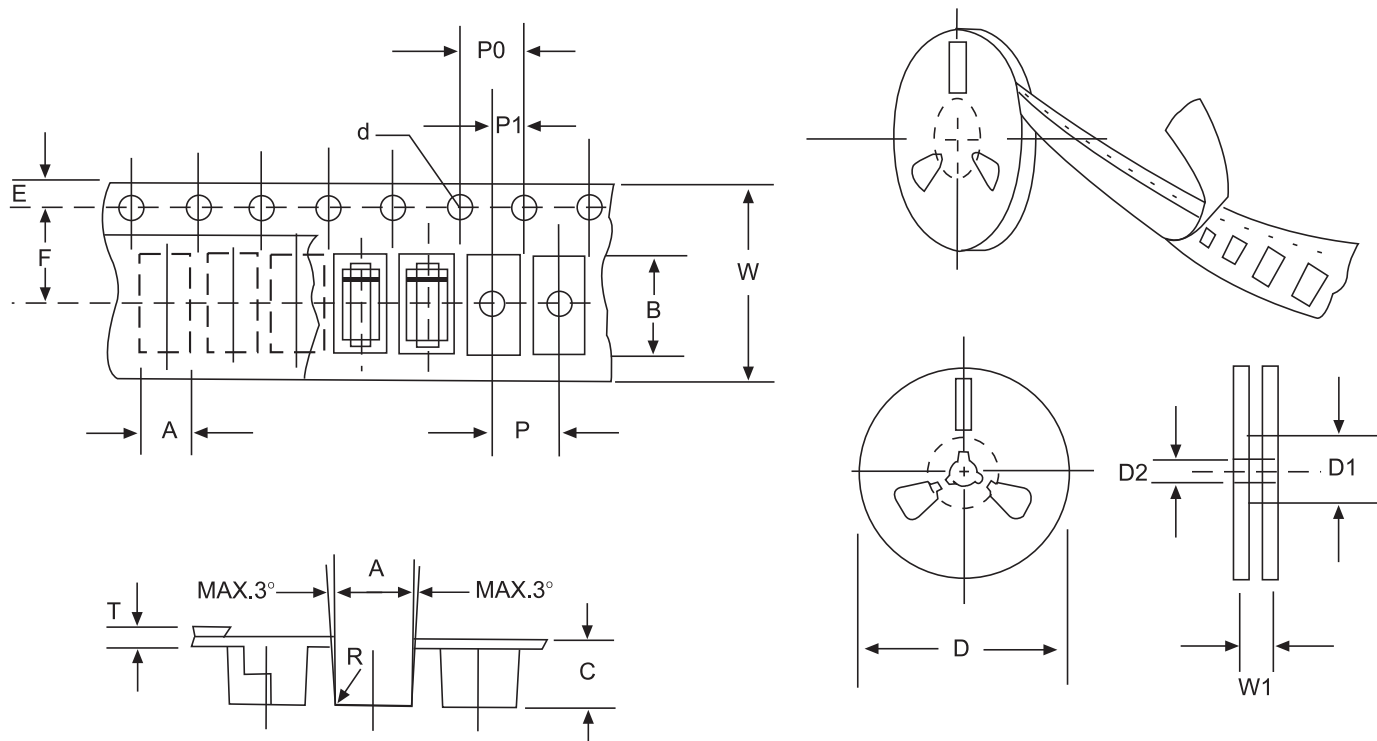


Fig:CONFIGURATION OF FLAT MELF TAPING

ITEM	SYMBOL	SMAG mm(inch)
Carrier width	A	2.79±0.1(0.110±0.004)
Carrier length	B	5.33±0.1(0.210±0.004)
Carrier depth	C	2.36±0.1(0.093±0.004)
Sprocket hole	d	1.55±0.05(0.061±0.002)
Reel outside diameter	D	279±2.0 (11± 0.079)
Reel inner diameter	D1	75 ±1.0 (2.95 ±0.039)
Feed hole diameter	D2	13±0.5(0.512±0.020)
Sprocket hole position	E	1.75±0.1(0.069±0.004)
Punch hole position	F	5.5±0.05(0.217±0.002)
Punch hole pitch	P	4.0±0.1(0.157±0.004)
Sprocket hole pitch	P0	4.0±0.1(0.157±0.004)
Embossment center	P1	2.0±0.1(0.079±0.004)
Total tape thickness	T	0.28±0.02(0.011 ±0.0008)
Tape width	W	12.0±0.2(0.472±0.008)
Reel width	W1	16.8±2.0(0.661±0.079)

NOTE: Devices are packed in accordance with EIA standard RS-481-A and specification given above.