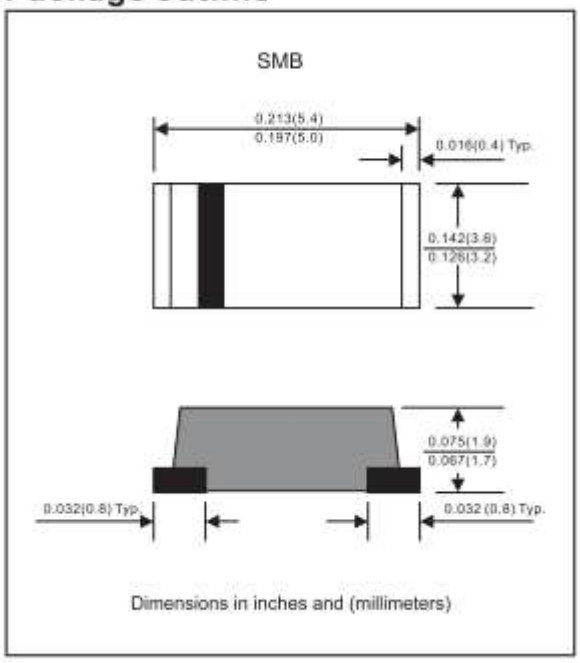
3.0A Surface Mount General Purpose Rectifiers - 50V-1000V

Features

◆Batch process design, excellent power dissipation offers better reverse leakage current and thermal resistance.
◆Low profile surface mounted application in order to optimize board space.
◆High current capability.
◆High surge capability.
◆Glass passivated chip junction.
◆Lead-free parts meet environmental standards of MIL-STD-19500 /228
◆Suffix "H" indicates Halogen-free parts, ex. ECCP301BL1HR.

Package outline



Mechanical Data

◆ Epoxy : UL94-V0 rated flame retardant
◆ Case : Molded plastic, DO-214AA / SMA
◆ Terminals :Plated terminals, solderable per MIL-STD-750, Method 2026
◆ Polarity : Indicated by cathode band
◆ Mounting Position : Any
◆ Weight : Approximated 0.09 gram

Maximum ratings and Electrical Characteristics (At T_A=25 °C unless otherwise noted)

PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current	See Fig.2	I_O			3.0	A
Forward surge current	8.3ms single half sine-wave (JEDEC methode)	I_{FSM}			100	A
Reverse current	$V_R = V_{RRM}$ T_J = 25 ℃	I_R			5.0	μA
	$V_R = V_{RRM}$ T_J = 125 ℃				250	
Typical thermal resistance	Junction to ambient	$R_{\theta JA}$		45		℃/W
	Junction to case	$R_{\theta JC}$		25		
Diode junction capacitance	f=1MHz and applied 4V DC reverse voltage	C_J		40		pF
Storage temperature		T_{STG}	-55		+175	℃

SYMBOLS	*1 VRRM (V)	*2 VRMS (V)	*3 VR (V)	*4 VF (V)	Operating temperature T J, (℃)
ECCP301B	50	35	50	1.1	-55 to +150
ECCP302B	100	70	100		
ECCP303B	200	140	200		
ECCP304B	400	280	400		
ECCP305B	600	420	600		
ECCP306B	800	560	800		
ECCP307B	1000	700	1000		

*1 Repetitive peak reverse voltage

*2 RMS voltage

*3 Continuous reverse voltage

*4 Maximum forward voltage@I_F=3.0A

Rating and characteristic curves

FIG.1-TYPICAL FORWARD CHARACTERISTICS

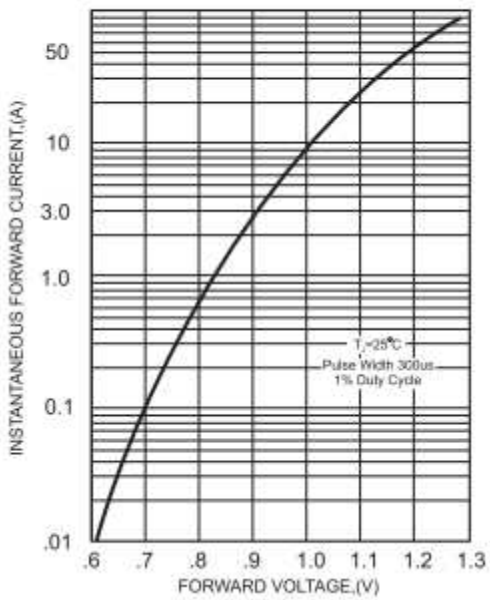


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

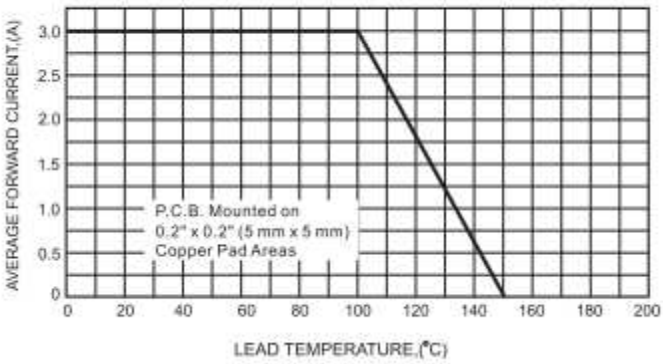


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

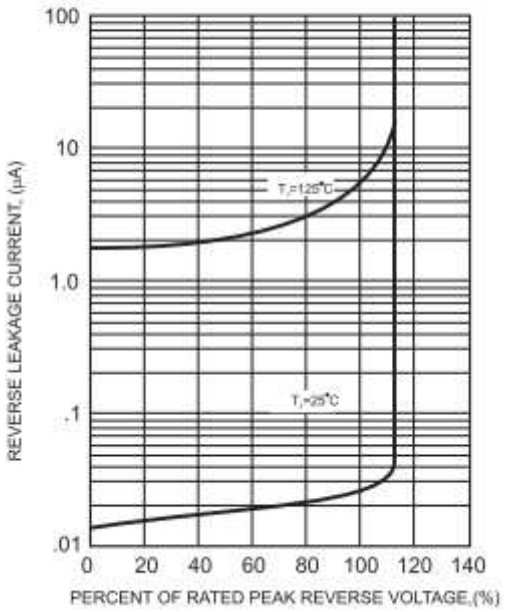


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

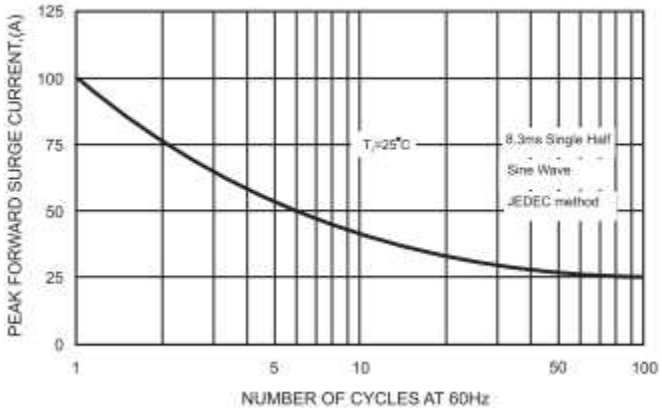
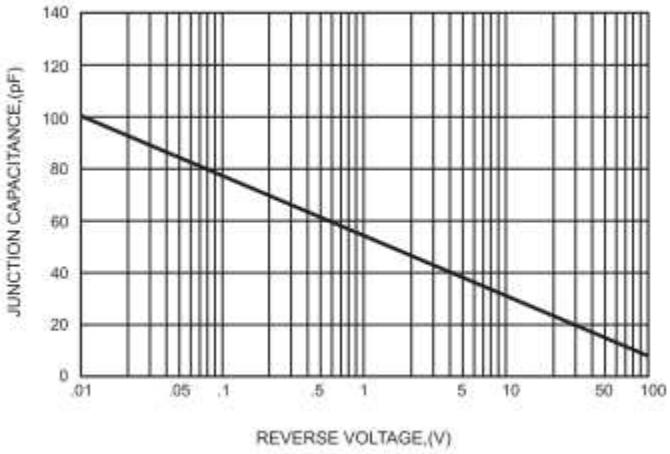


FIG.5-TYPICAL JUNCTION CAPACITANCE



Pinning information

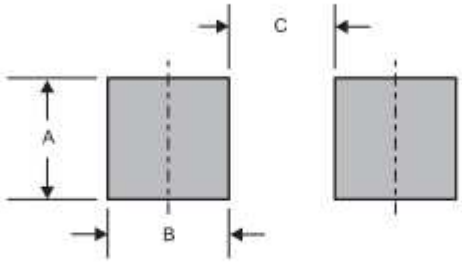
Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

Marking

Part No	Marking
ECCP301BL1R / ECCP301BL1**H**R	A31
ECCP302BL1R / ECCP302BL1**H**R	A32
ECCP303BL1R / ECCP303BL1**H**R	A33
ECCP304BL1R / ECCP304BL1**H**R	A34
ECCP305BL1R / ECCP305BL1**H**R	A35
ECCP306BL1R / ECCP306BL1**H**R	A36
ECCP307BL1R / ECCP307BL1**H**R	A37

H: Halogen free

Suggested solder pad layout



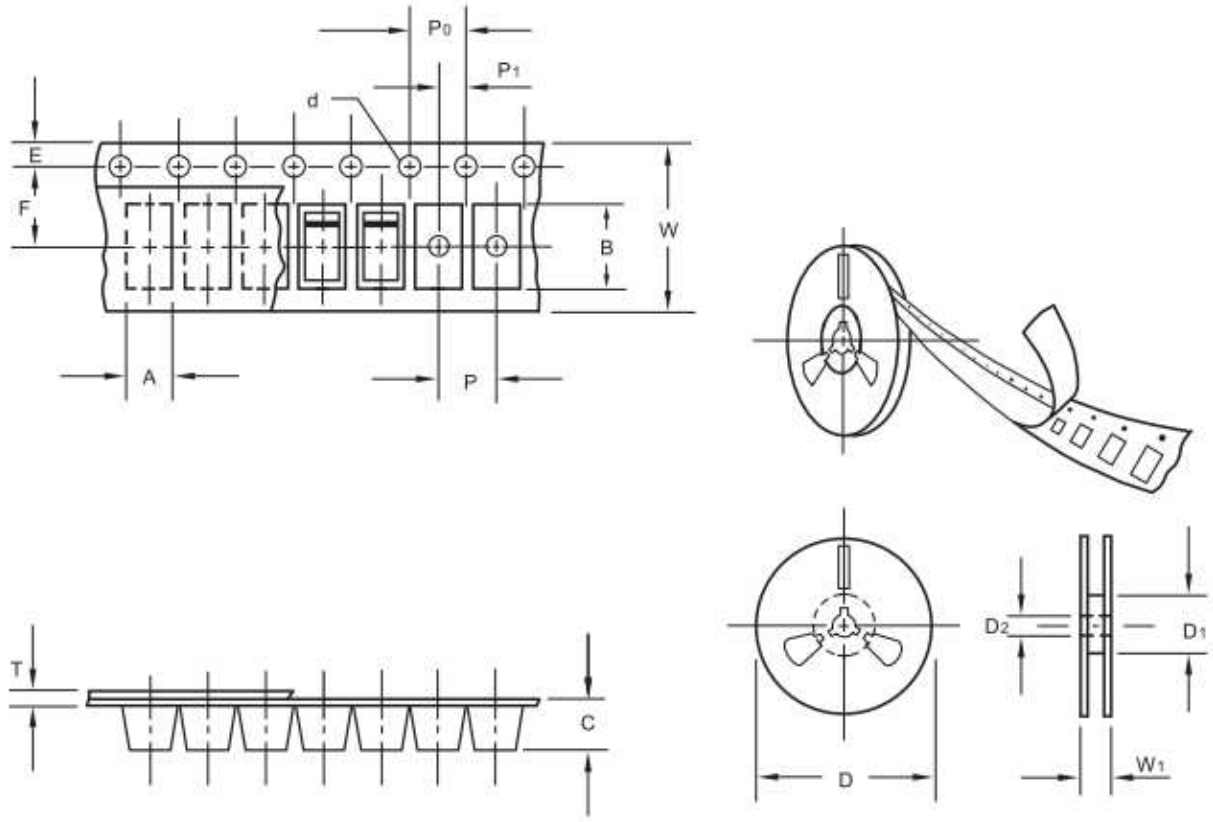
Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SMB	0.142 (3.60)	0.059 (1.50)	0.118 (3.00)

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)
SMB	13"	4,000	8.0	8,000	337*337*37	330	350*330*360	64,000	16.9

Packing information



unit:mm

Item	Symbol	Tolerance	SMB
Carrier width	A	0.1	3.81
Carrier length	B	0.1	5.74
Carrier depth	C	0.1	2.24
Sprocket hole	d	0.1	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	8.00
Sprocket hole pitch	P_0	0.1	4.00
Embossment center	P_1	0.1	2.00
Overall tape thickness	T	0.1	0.23
Tape width	W	0.3	12.00
Reel width	W_1	1.0	18.00

Note:Devices are packed in accor dance with EIA standar RS-481-A and specifications listed above.