

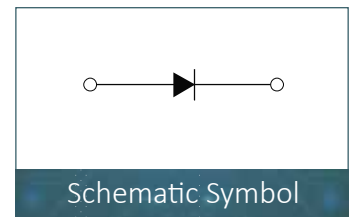
1. FEATURES

- Glass Passivated Die Construction
- Superfast reverse recovery time
- Low reverse leakage
- Ideally Suited for Automatic Assembly
- Lead Free Finish/RoHS Compliant



2. MECHANICAL DATA

- Case: DO-214AB(SMC)
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Polarity: As marked
- Weight: SMC 0.21 grams (approximate)



3. MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T_A = 25°C)

PARAMETER	SYMBOL	ES3A	ES3B	ES3C	ES3D	ES3F	ES3G	ES3J	UNIT	
Device marking code		ES3A	ES3B	ES3C	ES3D	ES3F	ES3G	ES3J		
Maximum repetitive peak reverse voltage	V _{RRM}	50	100	150	200	300	400	600	V	
Maximum RMS voltage	V _{R(RMS)}	35	70	105	140	210	280	420	V	
Maximum DC blocking voltage	V _{DC}	50	100	150	200	300	400	600	V	
Maximum average forward rectified current	I _{F(AV)}	3								A
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave,1 cycle	I _{FSM}	100								A
Storage temperature	T _{STG}	-55~+150								°C
Junction temperature	T _J	-55~+150								°C
Typical Junction-to-lead thermal resistance per diode	R _{θJ-L}	12								°C/W
Typical Junction-to-ambient thermal resistance per diode	R _{θJ-A}	47								°C/W
Maximum forward voltage @I _F =3A,T _J =25°C(Note1)	V _F	0.95				1.30		1.70	V	
Maximum reverse current @rated V _R per diode (Note2)	T _J =25°C	10							uA	
	T _J =125°C	500								
Maximum reverse recovery time @I _F =0.5A,I _R =1.0A,I _{RR} =0.25A	t _{rr}	35							nS	

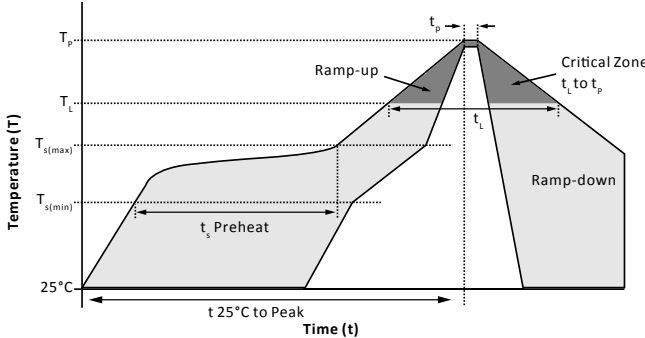
Note 1: Pulse test with PW=0.3mS

Note 2: Pulse test with PW=30mS



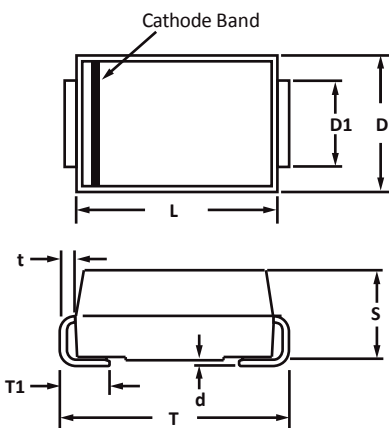
4. SOLDERING PARAMETERS

Reflow Condition		Lead-free assembly
Pre Heat	Temperature Max ($T_{s(min)}$)	150°C
	Temperature Max ($T_{s(max)}$)	200°C
	Time (min to max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus Temp (T_L) to peak)		3°C/second max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/second max
Reflow	Temperature (T_L) (Liquidus)	217°C
	Time (min to max) (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 (T_p)		8 minutes max.
Do not exceed		280°C



5. DO-214AB(SMC) PACKAGE DIMENSIONS

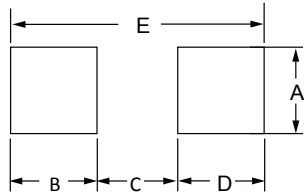
Item	Millimeters		Inches	
	Min.	Max.	Min.	Max.
L	6.60	7.11	0.260	0.280
D	5.59	6.22	0.220	0.245
D1	2.70	3.30	0.106	0.130
T	7.75	8.13	0.305	0.320
T1	0.76	1.52	0.030	0.060
d	-	0.20	-	0.008
s	2.06	2.62	0.079	0.103
t	0.152	0.31	0.006	0.012





6. RECOMMENDED PAD LAYOUT DIMENSIONS

Item	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	3.30	-	0.129	-
B	2.40	-	0.094	-
C	-	4.20	-	0.165
D	2.40	-	0.094	-
E	8.13 REF		0.320 REF	



7. ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
ES3A-ES3J	DO-214AB(SMC)	3000PCS	13"



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