Elektronische Bauelemente

ES31B ~ ES35B

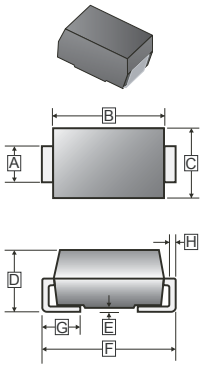
Voltage 50V ~ 600V
3.0 Amp Surface Mount Efficient Fast Recovery Rectifiers

RoHS Compliant Product
A suffix of "-C" specifies halogen-free

FEATURES

- Fast switching for high efficiency
- Low forward voltage drop
- High current capability
- Low reverse leakage current
- High surge current capability
- Glass passivated chip

SMB



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	1.91	2.11	E	-	0.203
B	4.06	4.70	F	5.08	5.59
C	3.30	3.94	G	0.76	1.27
D	2.13	2.44	H	0.15	0.31

MECHANICAL DATA

- Cases：Molded plastic DO-214AA(SMB)
- Epoxy：UL 94V-0 rate flame retardant
- Terminals：Solderable per MIL-STD-750 method 2026
- Polarity：Color band denotes cathode
- Mounting position：Any
- Weight：0.093 grams(approximate)

PACKAGE INFORMATION

Package	MPQ	LeaderSize
SMB	3K	13' inch

ABSOLUTE MAXIMUM RATINGS

(Rating at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz,resistive or inductive load.
For capacitive load, de-rate current by 20%.)

Parameter		Symbol	Rating					Unit
			ES31B	ES32B	ES33B	ES34B	ES35B	
Maximum Recurrent peak reverse voltage		V_{RRM}	50	100	200	400	600	V
Maximum RMS voltage		V_{RMS}	35	70	140	280	420	V
Maximum DC blocking voltage		V_{DC}	50	100	200	400	600	V
Maximum average forward rectified current	T_A=90°C	I_F	3.0					A
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method)		I_{FSM}	100					A
Maximum Instantaneous Forward Voltage @ 3.0A		V_F	0.9			1.3	1.5	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	T_J=25°C	I_R	5.0					μA
	T_J=125°C		150					
Typical Junction Capacitance [2]		C_J	50					pF
Maximum Reverse Recovery Time [1]		T_{RR}	20			25	50	nS
Typical Thermal Resistance [3]		$R_{\theta JA}$	55					°C / W
Operating Junction and Storage Temperature Range		T_{STG}, T_J	-55 ~ 150					°C

Notes:
1. Reverse recovery test conditions I_F=0.5A, I_R=1.0A, I_{RR}=0.25A.
2. Measured at 1.0MHz and applied reverse voltage of 4.0 Volts DC.
3. Thermal resistance junction to ambient.

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CHARACTERISTIC CURVES

FIG.1 - FORWARD CURRENT DERATING CURVE

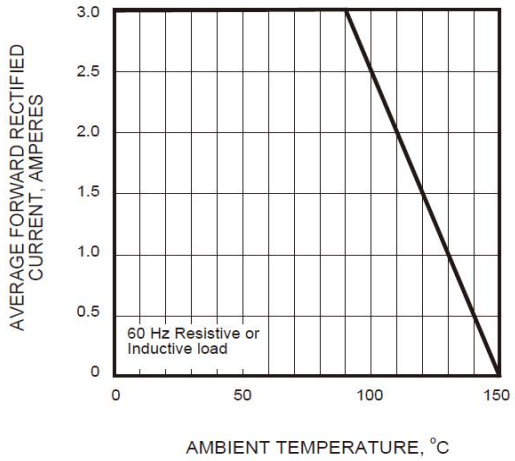

FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

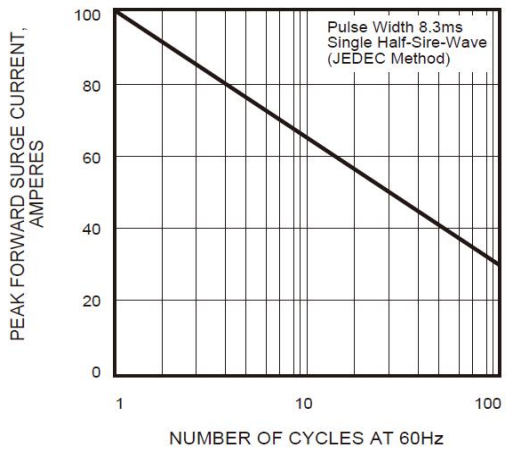

FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

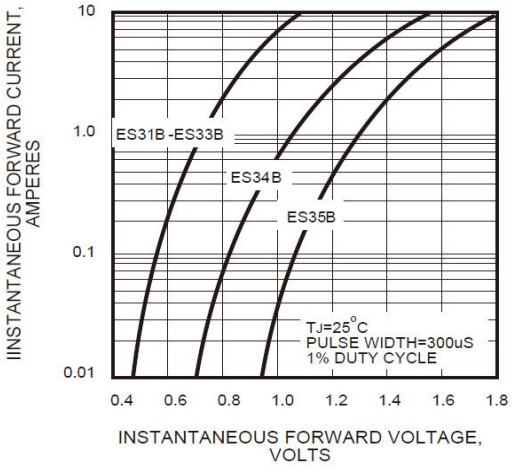

FIG.4 - TYPICAL REVERSE CHARACTERISTICS

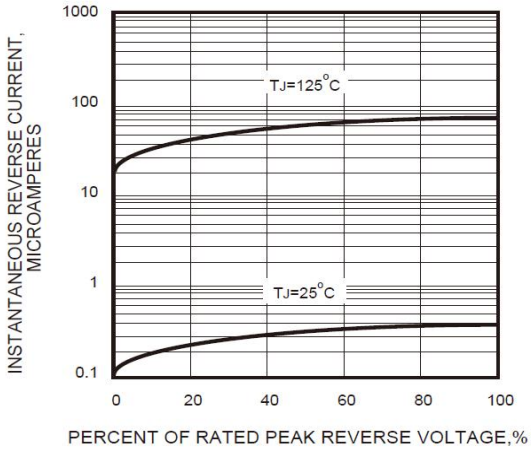

FIG.5 - TYPICAL JUNCTION CAPACITANCE