

Super Fast Glass Passivated Rectifiers

ES1010TS~ES1060TS

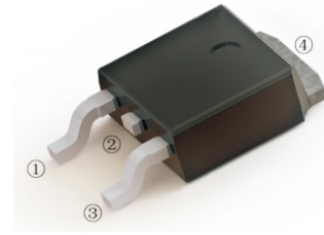
10A

100 to 600V

TO-252(D-PAK)

Features

- ◆ High current capability
- ◆ Low forward voltage drop
- ◆ Low power loss, high efficiency
- ◆ High surge capability
- ◆ High temperature soldering guaranteed
- ◆ Mounting position: any



TO-252(D-PAK)

Maximum Ratings and Electrical Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Parameter		Symbol	ES1010TS	ES1020TS	ES1030TS	ES1040TS	ES1050TS	ES1060TS	Unit
Maximum Recurrent Peak Reverse Voltage		V _{RRM}	100	200	300	400	500	600	V
Maximum RMS voltage		V _{RMS}	70	140	210	280	350	420	V
Maximum DC Blocking Voltage		V _{DC}	100	200	300	400	500	600	V
Maximum Average Forward Rectified Current		I _{F(AV)}	10						A
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)		I _{FSM}	170						A
Max Instantaneous Forward Voltage at 10 A DC		V _F	0.95		1.30		1.70		V
Maximum DC Reverse Current at Rated DC Blocking Voltage	Ta =25℃	I _R	1						μA
	Ta =125℃		300						
Typical Junction Capacitance f=1MHz,4V DC		C _J	45						pF
Typical Thermal Resistance ⁽¹⁾		R _{θJA}	15						℃/W
Maximum Reverse Recovery Time ⁽²⁾		t _{rr}	35						ns
Operating Junction Temperature Range		T _J	-55 ~ +150						℃
Storage Temperature Range		T _{STG}	-55 ~ +150						℃

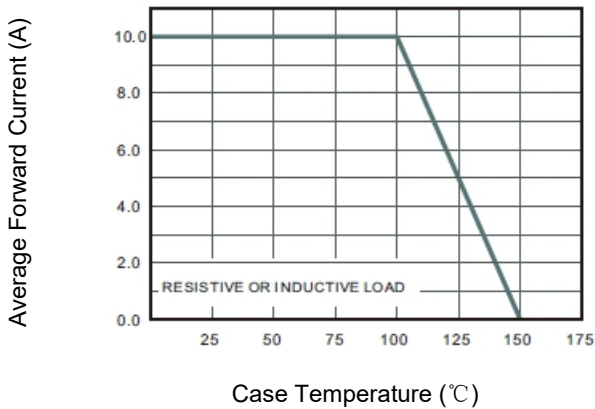
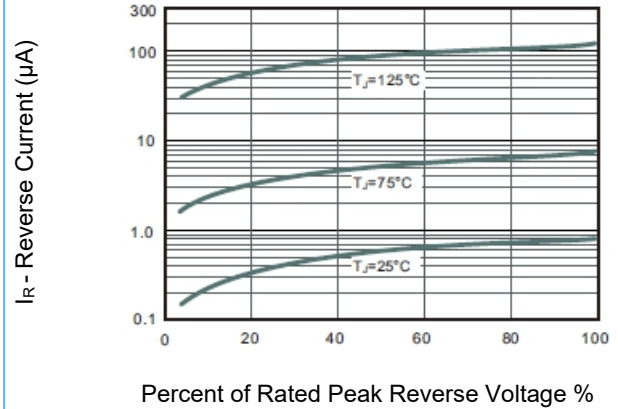
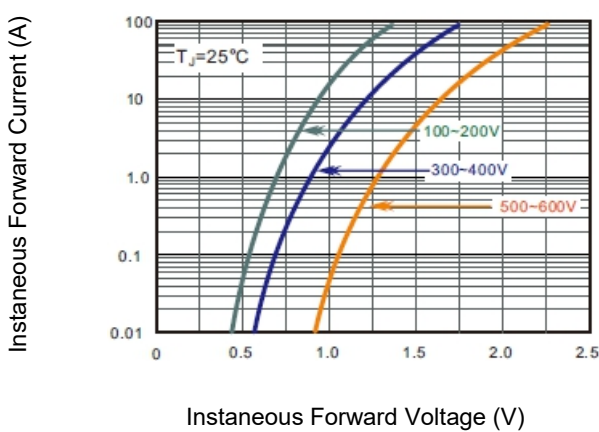
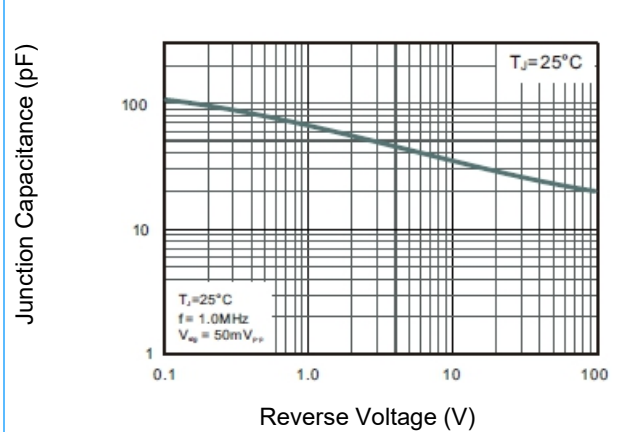
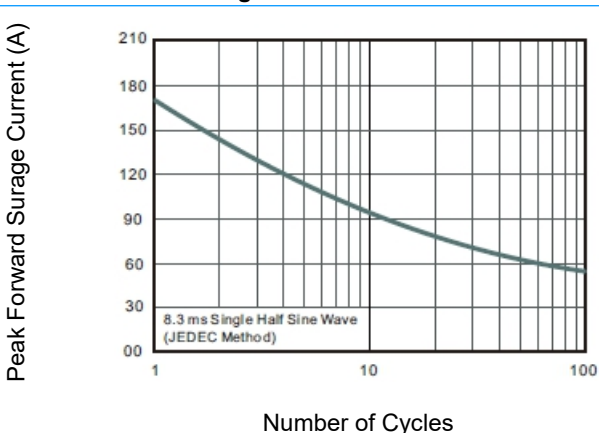
(1) P.C.B. mounted with 10cm x 10cm x 1mm copper pad areas.

(2) Measured with $I = 0.5 A$, $I = 1 A$, $I = 0.25 A$.

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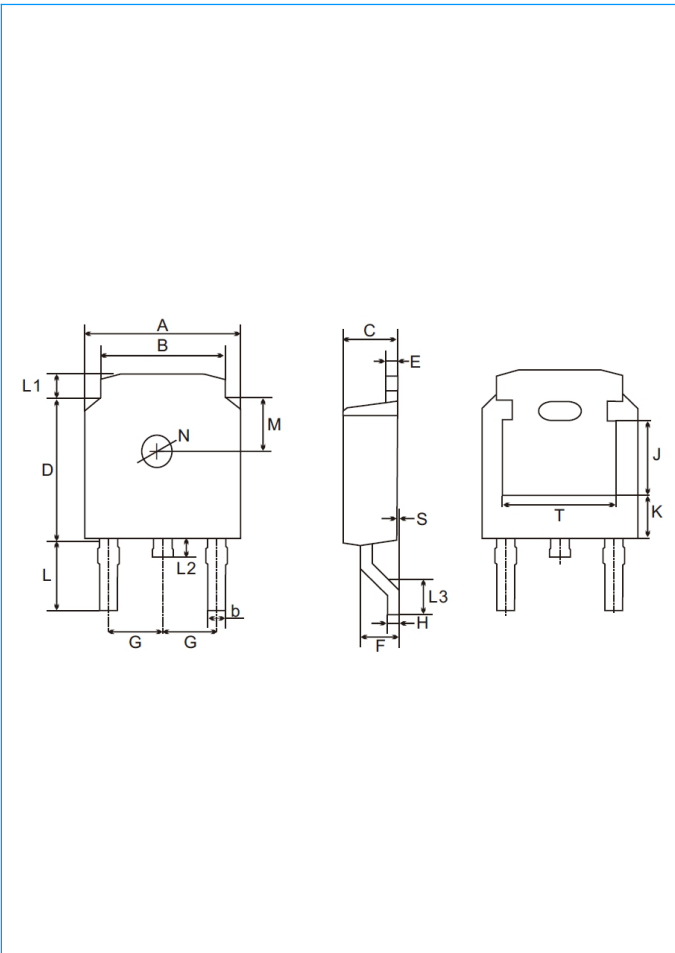
Characteristic Curves

Fig. 1. Maximum Average Forward Current Rating

Fig. 2. Typical Reverse Characteristics

Fig. 3. Typical Forward Characteristics

Fig. 4. Typical Junction Capacitance

Fig. 5. Maximum Non-Repetitive Peak Forward Surge Current


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TO-252(D-PAK) Package Outline Dimensions



Symbol	MM		MIL	
	Min.	Max.	Min.	Max.
A	6.3	6.7	248	264
B	5.1	5.5	201	217
b	0.3	0.8	12	31
C	2.1	2.5	83	98
D	5.9	6.3	232	248
E	0.4	0.6	16	24
F	1.3	1.8	51	71
G	2.29 Typ.		90 Typ.	
H	0.45	0.55	18	22
L	2.7	3.1	106	122
L1	0.8	1.2	31	47
L2	0.6	1.0	24	39
L3	1.4	1.75	55	69
S	0.0	0.1	0	4
M	1.8 Typ.		71 Typ.	
N	1.3 Typ.		51 Typ.	
J	3.16 Ref.		124 Ref.	
K	1.8 Ref.		71 Ref.	
T	4.83 Typ.		190 Typ.	

Packaging Information

Part Number	Component Package	Quantity
ES1010TS~ES1060TS	TO-252(D-PAK)	2500 PCS

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