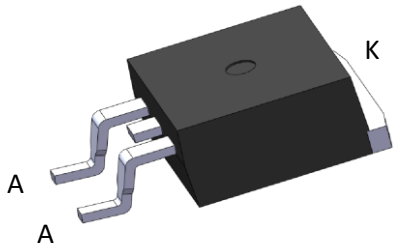
S-LFR15HT120SE2

Fast Recovery Diode



D²PAK（TO-263）

1. FEATURES

- We declare that the material of product compliance with RoHS requirements and Halogen Free.
- Plastic package has Underwriters Laboratory Flammability Classification 94 V-0
- High junction temperature
- Fast recovery time
- High temperature soldering guaranteed:260°C/10 seconds at terminals Low power loss,high efficiency
- S- prefix for automotive and other applications requiring unique site and control change requirements; AEC-Q101 qualified and PPAP capable.

2. DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
S-LFR15HT120SE2	LFR15HT120S	800pcs/Tape&Reel

3. MAXIMUM RATINGS(Tc=25ºC)

Parameter	Symbol	Limit	Unit
Maximum Repetitive Peak Reverse Voltage	VRRM	1200	V
Maximum RMS Voltage	VRMS	840	V
Maximum DC Blocking Voltage	VR	1200	V
Average Forward Current (Tc=130℃, Duty Cycle=0.5)	IF(AV)	15	A
Peak Forward Surge Current 10ms Single Half Sine Wave Superimposed On Rated Load	IFSM	200	A
Storage Temperature Range	TSTG	-55 ~ +175	℃
Operation Junction Temperature Range	TJ	-55 ~ +175	℃
Thermal Resistance, Junction−to−Case	RθJC	1.5	℃/W

4. ELECTRICAL CHARACTERISTICS

Characteristic	Symbol	Conditions	Min	Typ	Max	Unit
Forward Voltage	VF	IF=15A, Tj=25℃		1.8	2.1	V
		IF=15A, Tj=150℃		1.2	1.8	V
Reverse Leakage Current	IR	VR=1200V, Tj=25℃			10	μA
		VR=1200V, Tj=125℃			300	μA
Reverse Recovery Time	Trr	IF=1A, di/dt=-100A/μs, VR=30V, Tj=25℃		50	75	ns

5. ELECTRICAL CHARACTERISTICS CURVES

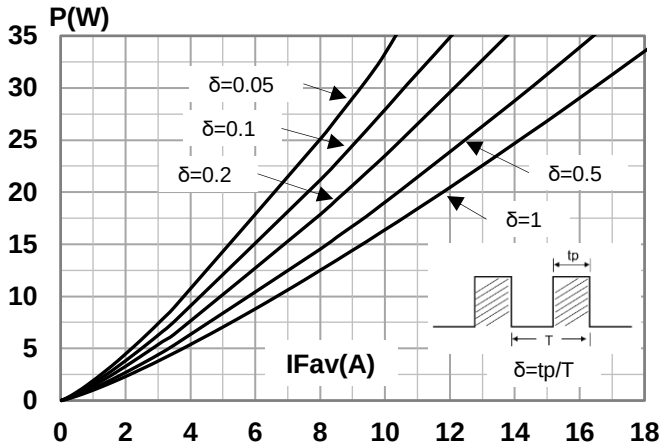


Fig1- Conduction Losses Versus Average Current

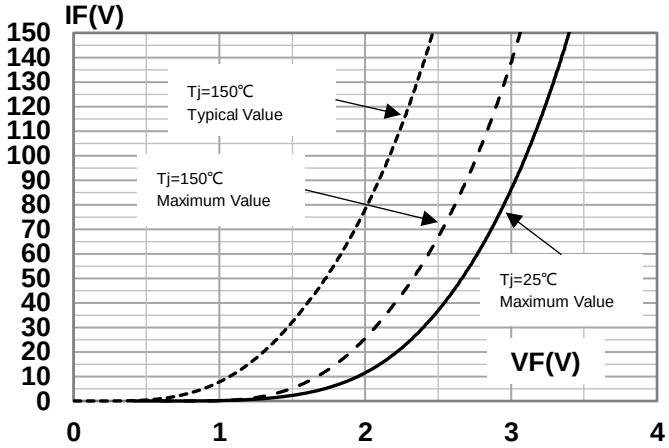


Fig2- Forward Current Versus Forward Voltage

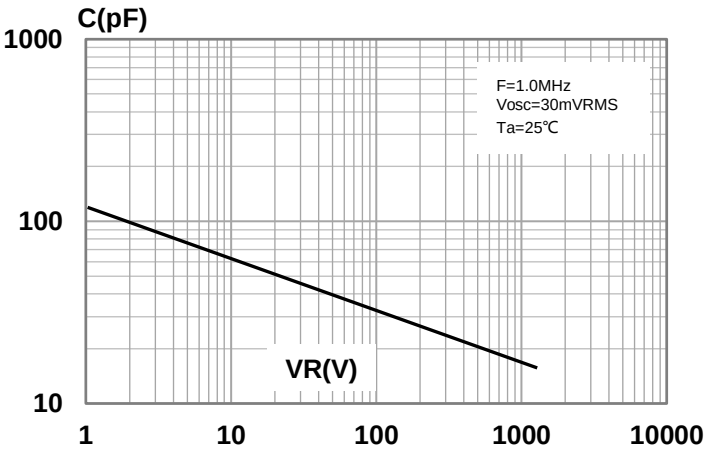


Fig3- Junction Capacitance Versus Reverse Voltage Applied (typical value)

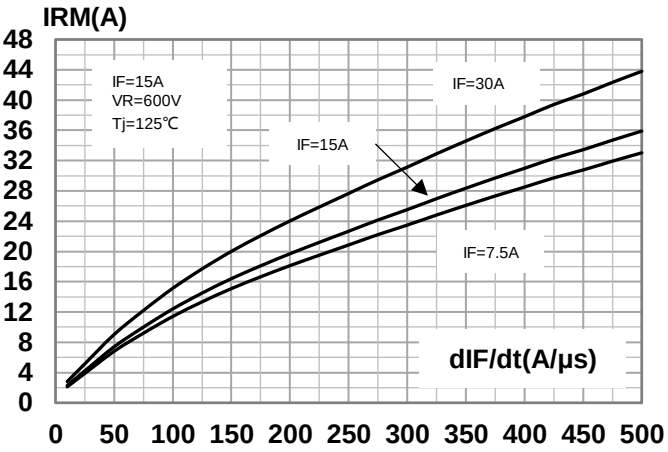


Fig4- Peak reverse recovery current versus dIF/dt (typical values)

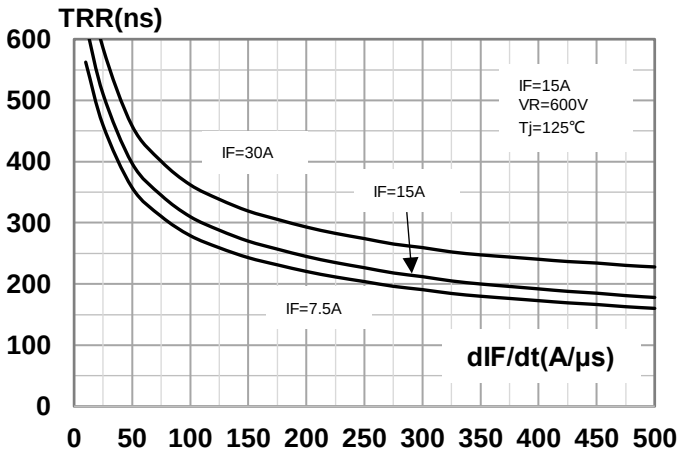


Fig5- Reverse recovery time versus dIF/dt (typical values)

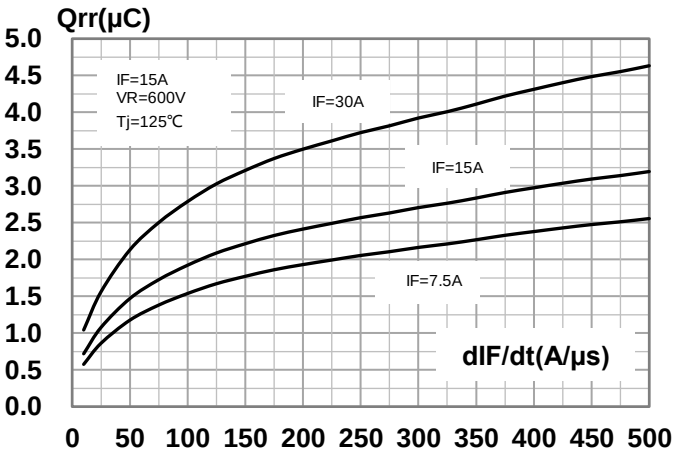


Fig6- Reverse recovery charges versus dIF/dt (typical values)

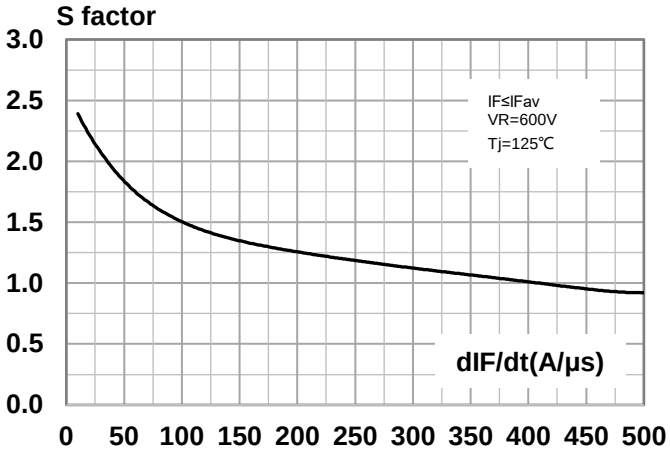


Fig7- Softness factor versus dIF/dt (typical value)

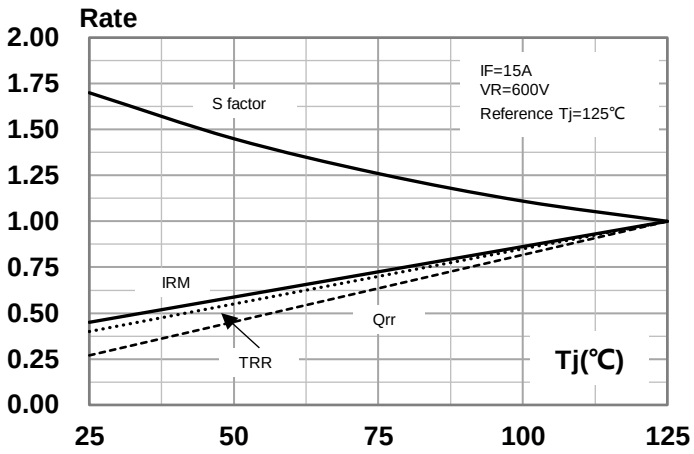


Fig8- Relative variations of dynamic parameters versus junction temperature

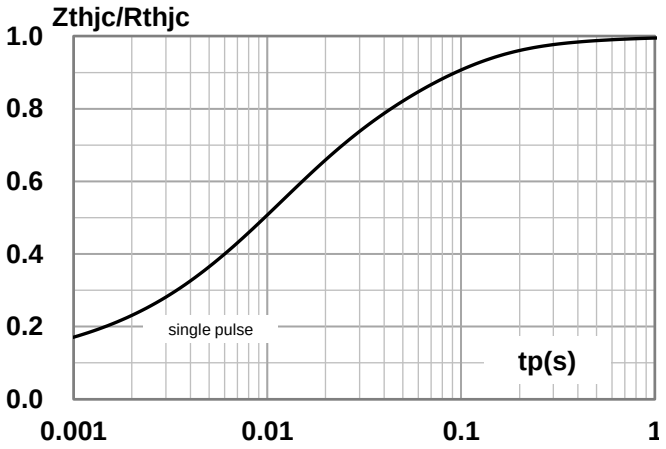


Fig9- Relative Variation of thermal impedance junction to case versus pulse duration

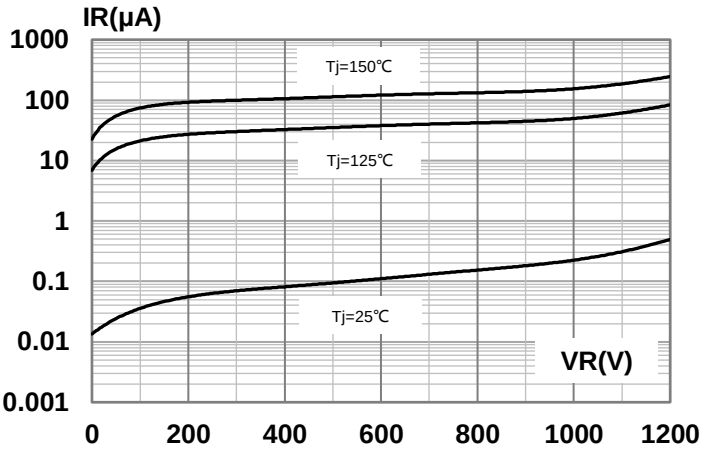


Fig10- Reverse Leakage Current Versus Reverse Voltage Applied (typical values)

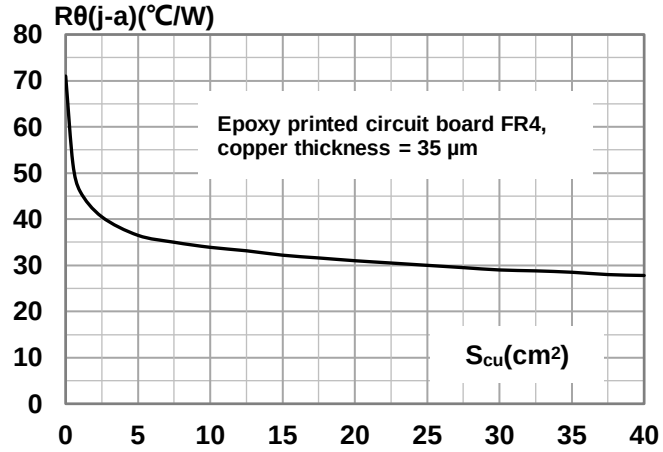
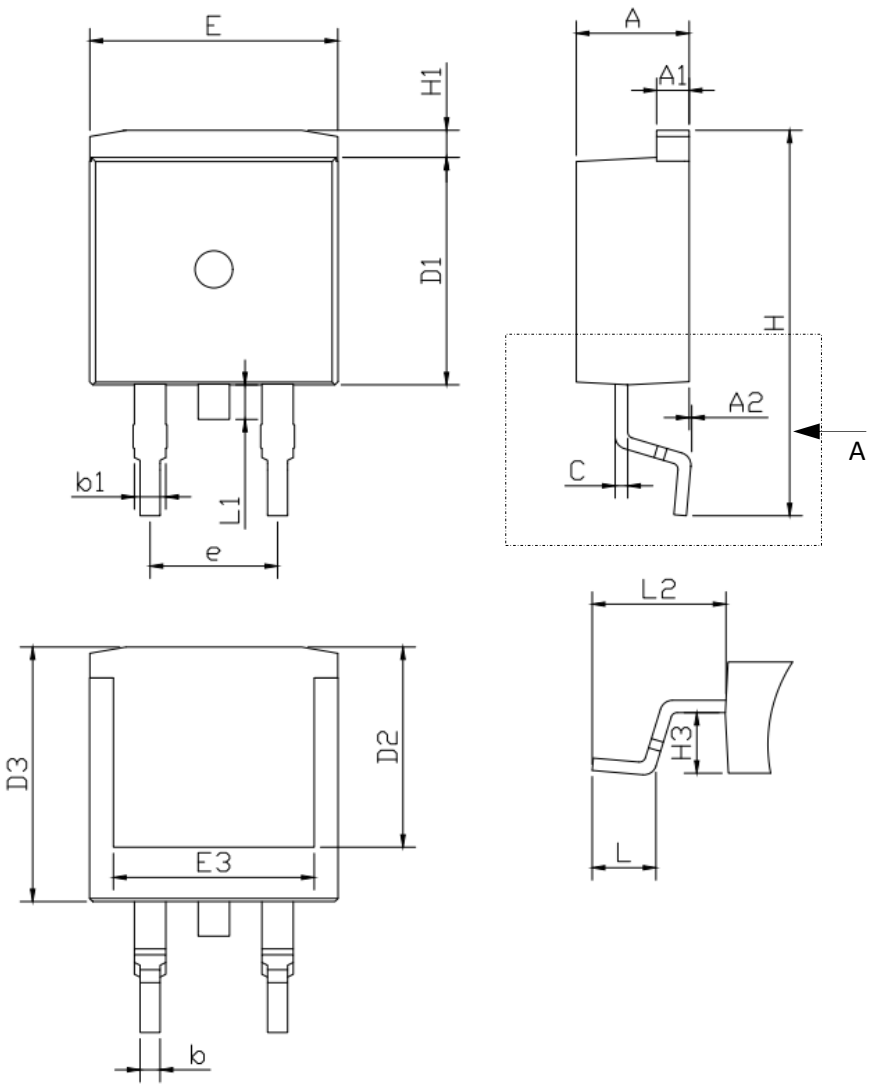


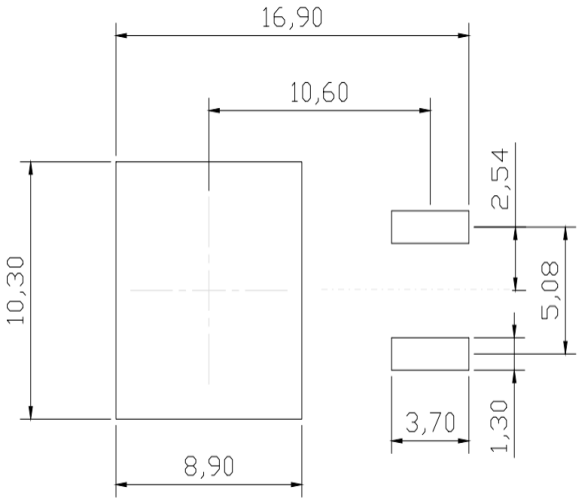
Fig11- Thermal resistance junction to ambient versus copper surface under each lead

6. OUTLINE AND DIMENSIONS



D²PAK/TO-263			
DIM	MIN	NOR	MAX
A	4.40	4.50	4.60
A1	1.20	1.30	1.40
A2	0.00	-	0.15
b	0.70	0.80	0.90
b1	1.05	1.25	1.45
C	0.40	0.50	0.60
D1	9.00	9.20	9.40
D2	8.1REF		
D3	10.10	10.40	10.70
E	9.70	9.90	10.10
E3	8.0REF		
e	4.88	5.08	5.28
H	15.20	15.50	15.80
H1	1.00	1.20	1.40
H3	2.20	2.40	2.60
L	2.34	2.54	2.74
L1	1.10	1.40	1.70
L2	5.10	5.30	5.50
Dimensions are in mm			

7. SOLDERING FOOTPRINT



DISCLAIMER

- Curve guarantee in the specification. The curve of test items with electric parameter is used as quality guarantee. The curve of test items without electric parameter is used as reference only.

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