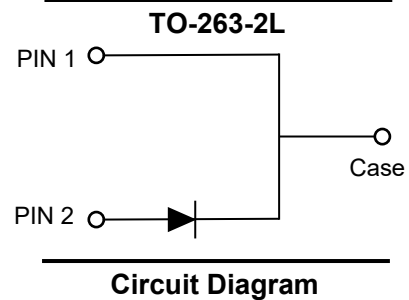
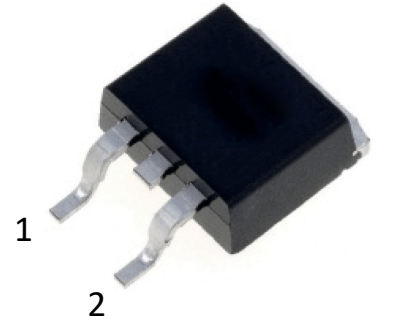


Feature

- Low conduction loss due to low V_F
- Extremely low switching loss by tiny Q_C
- Negligible reverse recovery
- Positive Temperature Coefficient
- Pb-free / RoHS compliant
- Highly rugged due to better surge current
- High-reliability



Applications

- Solar inverters
- Uninterruptable power supplies
- Motor drives
- Power Factor Correction

Absolute maximum rating@25°C

Parameter		Symbol	Value	Units
Repetitive Peak Reverse Voltage		V_{RRM}	1200	V
Surge Peak Reverse Voltage		V_{RSM}	1200	V
DC Peak Reverse Voltage		V_R	1200	V
Continuous Forward Current	$T_c=25^\circ\text{C}$	I_F	54	A
	$T_c=135^\circ\text{C}$		27	
	$T_c=153^\circ\text{C}$		20	
Repetitive Peak Forward Surge Current	$T_c=25^\circ\text{C}, t_p=10\text{ms}, \text{Half Sine Pulse}$	I_{FRM}	86	A
	$T_c=110^\circ\text{C}, t_p=10\text{ms}, \text{Half Sine Pulse}$		58	
Non-repetitive Forward Surge Current	$T_c=25^\circ\text{C}, t_p=10\text{ms}, \text{Half Sine Pulse}$	I_{FSM}	160	A
	$T_c=110^\circ\text{C}, t_p=10\text{ms}, \text{Half Sine Pulse}$		130	
i^2dt value	$T_c=25^\circ\text{C}, t_p=10\text{ms}, \text{Half Sine Pulse}$	$\int i^2dt$	128	A^2s
	$T_c=110^\circ\text{C}, t_p=10\text{ms}, \text{Half Sine Pulse}$		84	
Power Dissipation	$T_c=25^\circ\text{C}$	P_{tot}	214	W
	$T_c=110^\circ\text{C}$		93	
Operating junction Range		T_J	-55~+175	$^\circ\text{C}$
Soldering Temperature		T_{stg}	-55~+150	$^\circ\text{C}$

Schoktty Barrier Diode

PSICSD2P1200V20N

Electrical characteristics per line@25°C (unless otherwise specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Forward Voltage	V_F	$I_F = 20A, T_J = 25^\circ C$	-	1.4	1.7	V
		$I_F = 20A, T_J = 175^\circ C$	-	2.0	-	
Reverse Current	I_R	$V_R = 1200V, T_J = 25^\circ C$	-	-	200	μA
		$V_R = 1200V, T_J = 175^\circ C$	-	-	400	
Total Capacitive Charge	Q_C	$V_R = 800V, Q_C = \int_0^{V_R} C(V) dV, T_J = 25^\circ C$	-	97	-	nC
Total Capacitance	C	$V_R = 0V, f = 1MHz$	-	1318	-	pF
		$V_R = 400V, f = 1MHz$	-	91	-	
		$V_R = 800V, f = 1MHz$	-	70	-	

Thermal Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Units
Thermal Resistance (Junction to Case)	$R_{\theta JC}$	-	0.7	-	$^\circ C/W$

Typical Characteristics

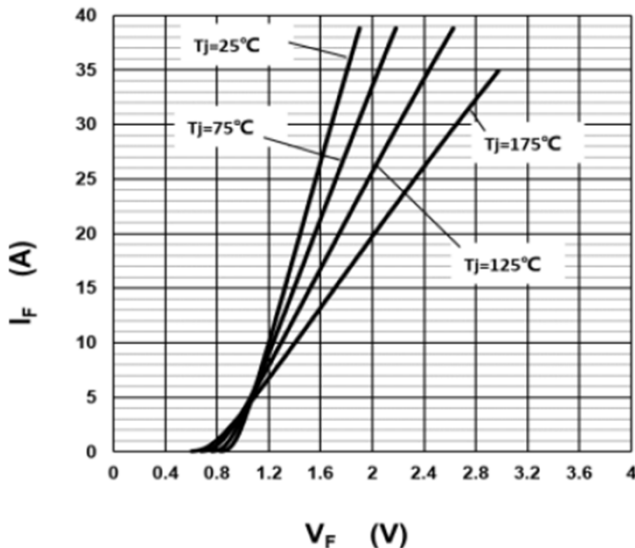


Fig.1 Forward Characteristics

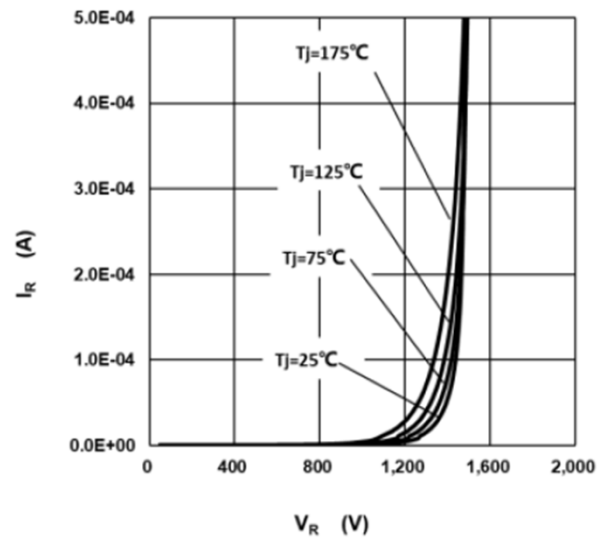


Fig.2 Reverse Characteristics

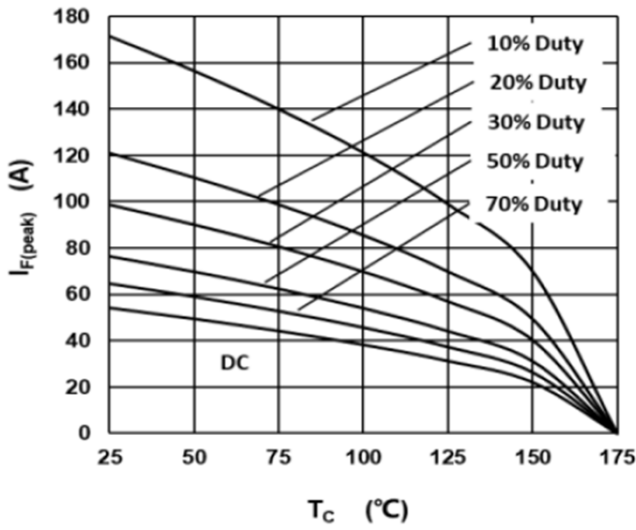


Fig.3 Current Derating

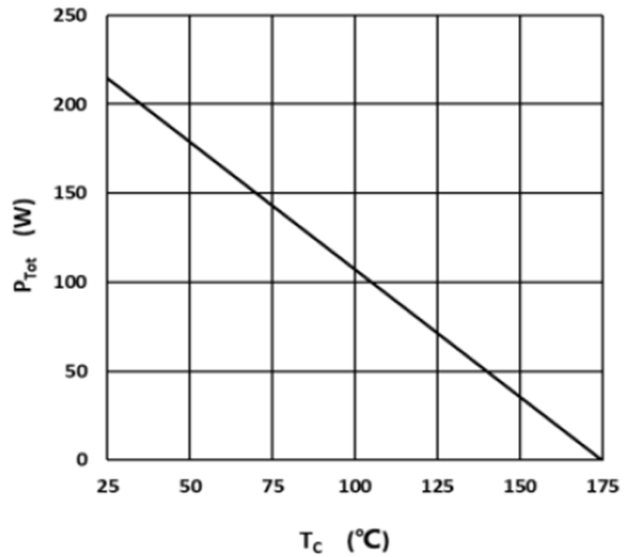


Fig.4 Power Derating

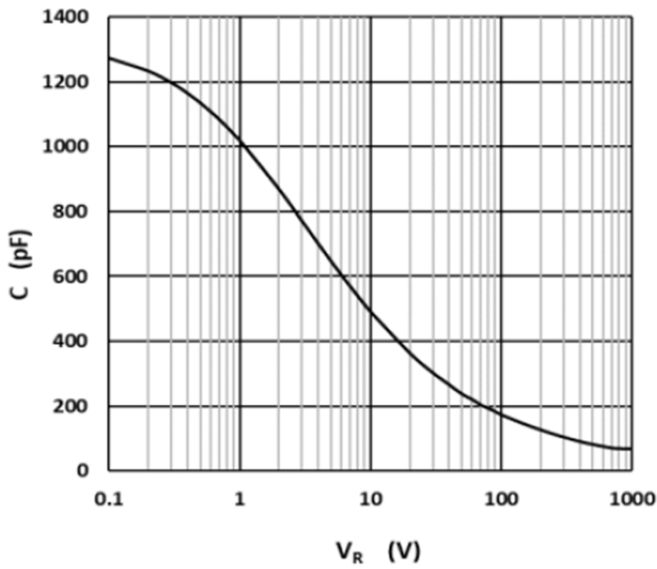


Fig.5 Capacitance vs. Reverse Voltage

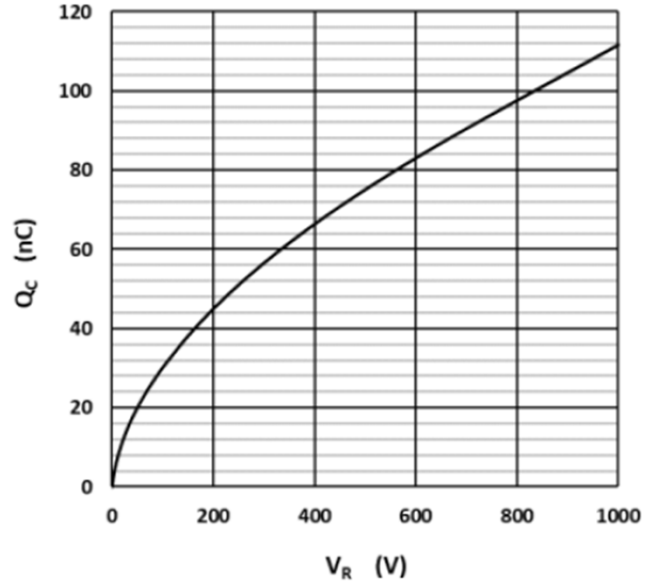


Fig.6 Capacitance Charge vs. Reverse Voltage

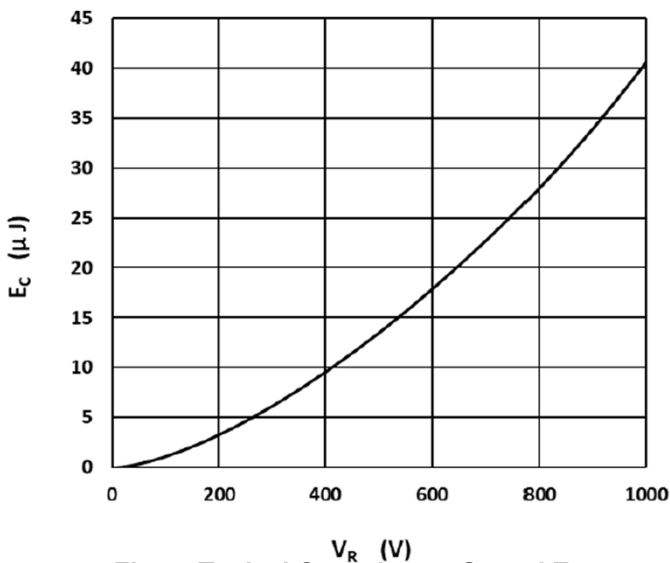


Fig.7 Typical Capacitance Stored Energy

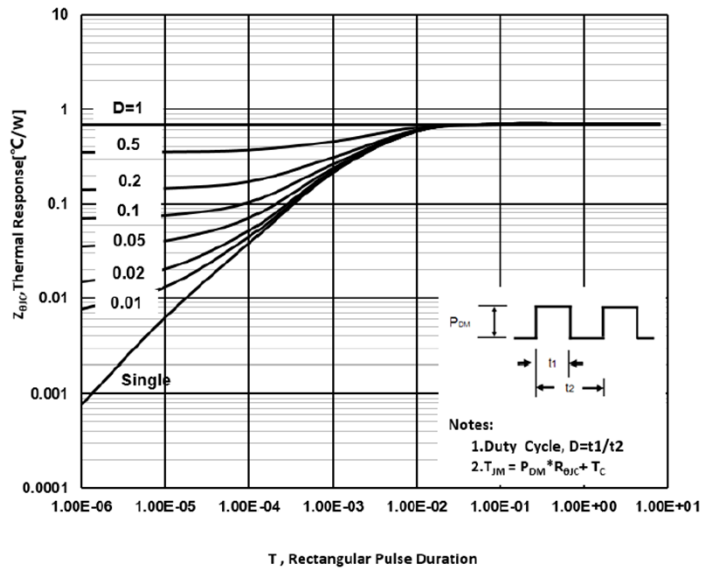
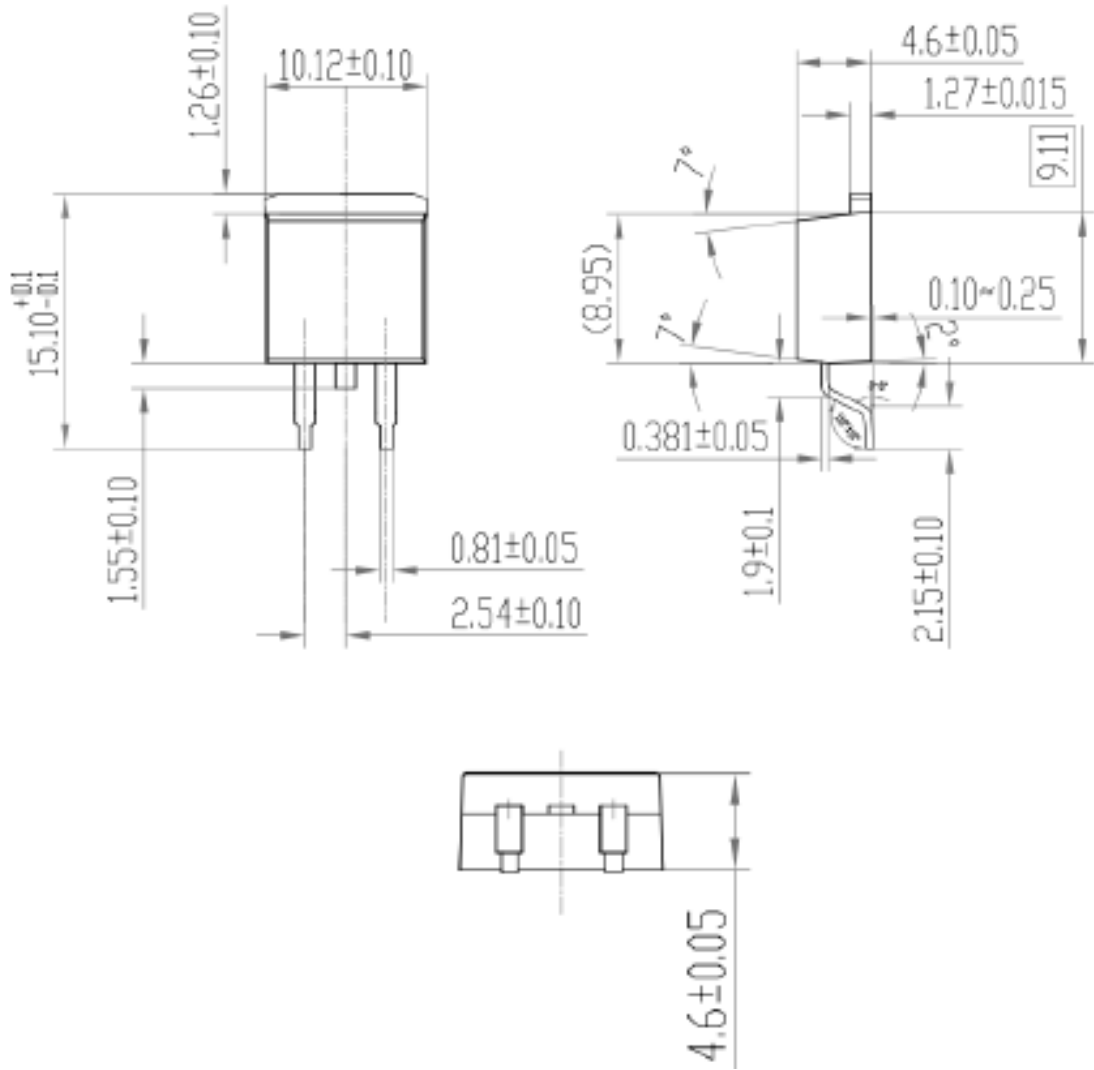



Fig.8 Transient Thermal Impedance

Product Dimension (TO-263-2L)




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