

HY3003D/ IV



Feature

- 30V/100A
 $R_{DS(ON)} = 2.9m\Omega(\text{typ.})@V_{GS} = 10V$
 $R_{DS(ON)} = 3.8m\Omega(\text{typ.})@V_{GS} = 4.5V$
- 100% Av I nche Tested
- Reli le nd Rugged
- H logen Free nd Green Device
(RoHS Compli nt)

Applications

- Power M n gement for Inverter

Ordering and Marking Info

D	U
HY3003	HY3003
XYMXXXXXX	XY Y Y

Absolute Maximum

Symbol	Parameter
Common Ratings (Tc=25°C)	
V _{DSS}	Drain-Source Voltage
V _{GSS}	Gate-Source Voltage
T _J	Junction Temperature
T _{STG}	Storage Temperature
I _S	Source Current
Mounted on Large Heat Sink	
I _{DM}	Pulsed Drain Current
I _D	Continuous Drain Current
P _D	Maximum Power Dissipation
R _{θJC}	Thermal Resistance
R _{θJA}	Thermal Resistance
E _{AS}	Single Pulse Energy

Note: * Repetitive rating; pulse rating
 ** Surface mounted on large heat sink
 *** Limited by T_{Jmax}, see Table 1

Electrical Characteristics

Symbol	Parameter
Static Characteristics	
BV _{DSS}	Drain-Source Breakdown Voltage
I _{DSS}	Drain-to-Source Leakage Current
V _{GS(th)}	Gate Threshold Voltage
I _{GSS}	Gate-Source Leakage Current
R _{DS(ON)*}	Drain-Source On-State Resistance
Diode Characteristics	
V _{SD*}	Diode Forward Voltage
t _{rr}	Reverse Recovery Time
Q _{rr}	Reverse Recovery Charge

HY3

Elec

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Gate	
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	Ql(4
	Qls
	Qld

Note: *P

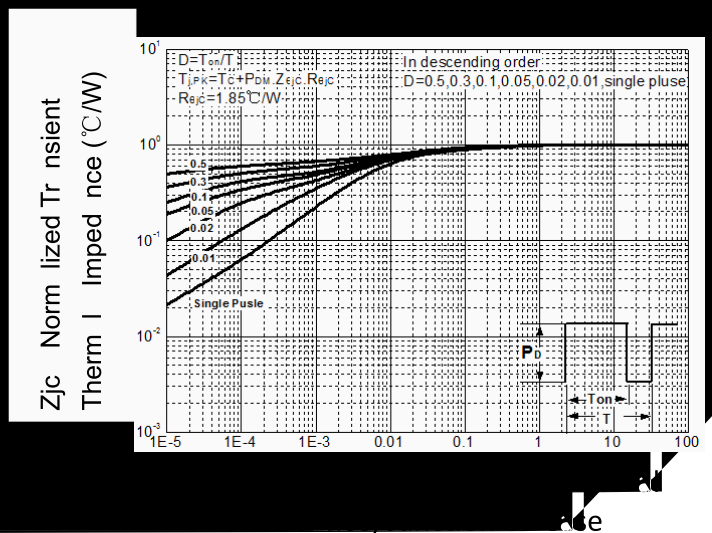
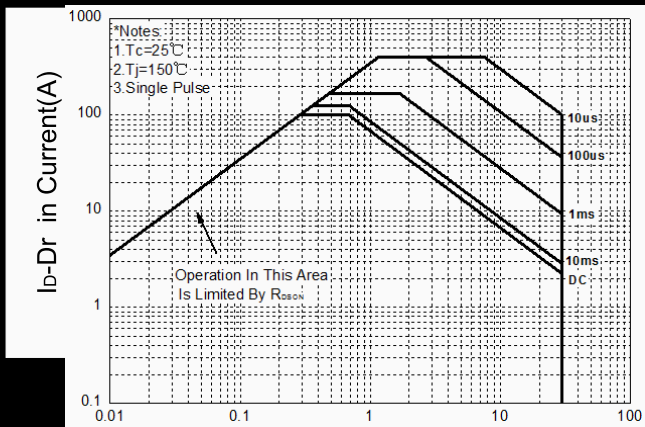
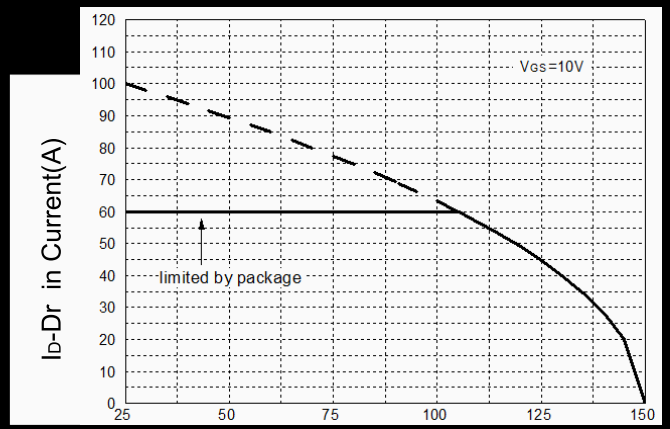
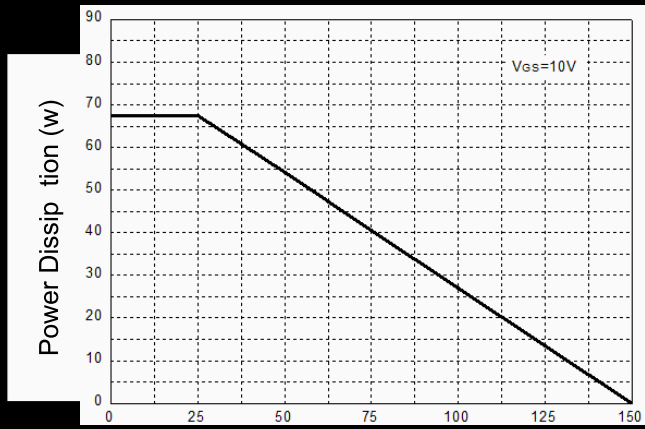


Figure 5: Output Characteristics

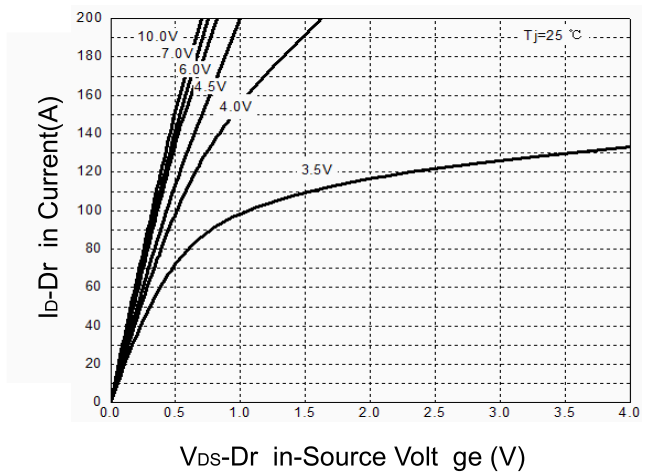
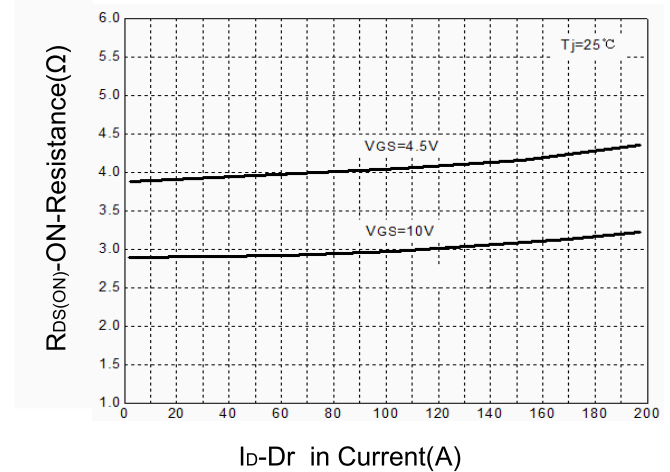


Figure 6: Drain-Source On Resistance



Typical Operating Characteristics(Con

Figure 7: On-Resistance vs. Temperature

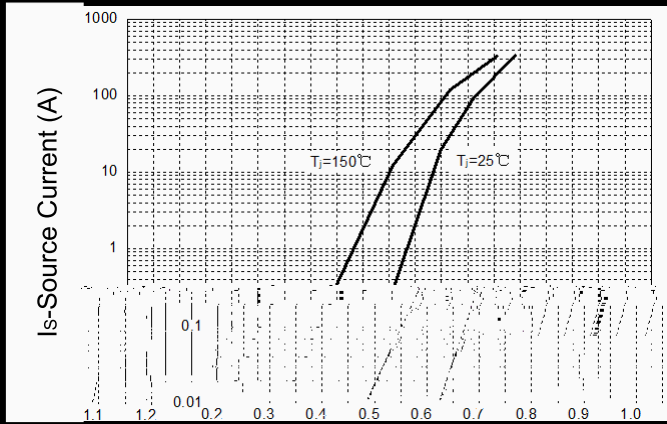
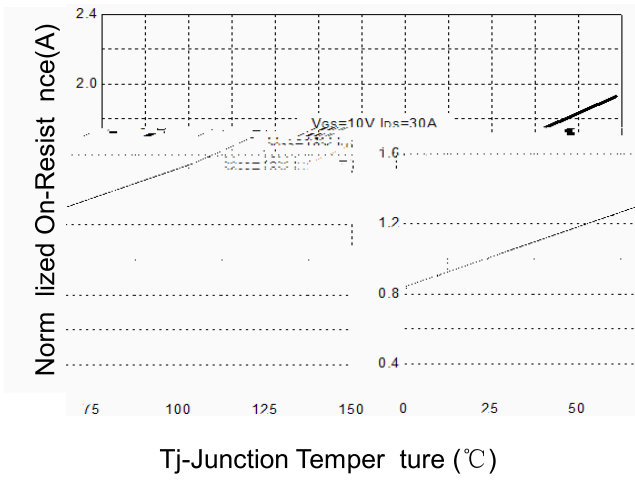
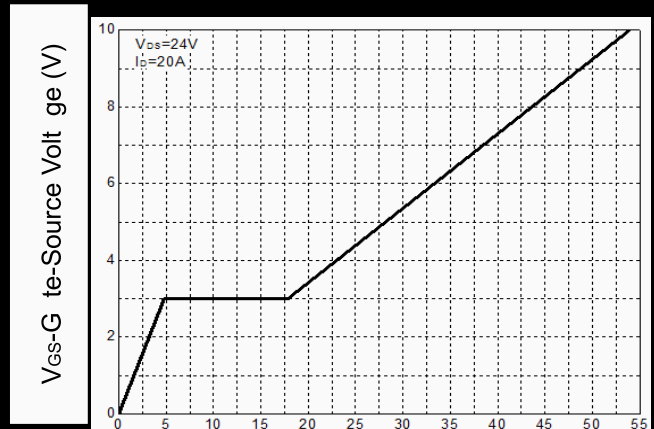
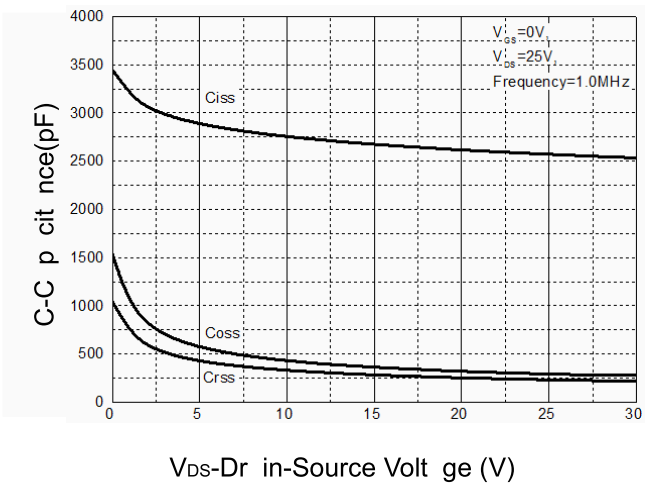
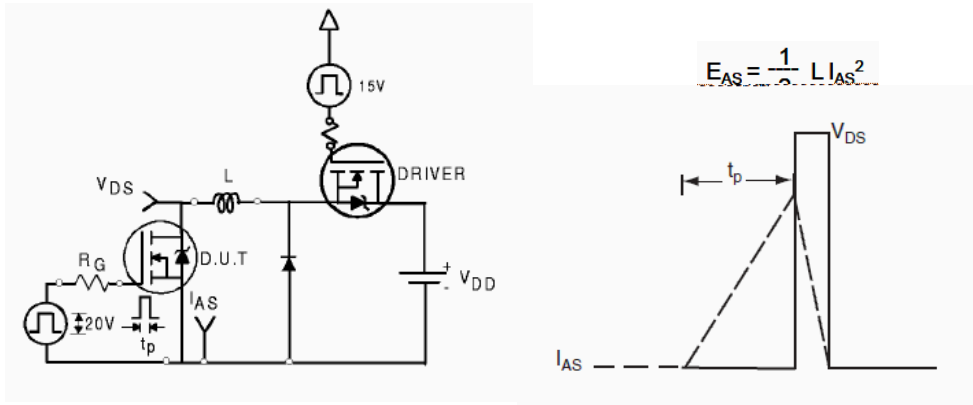


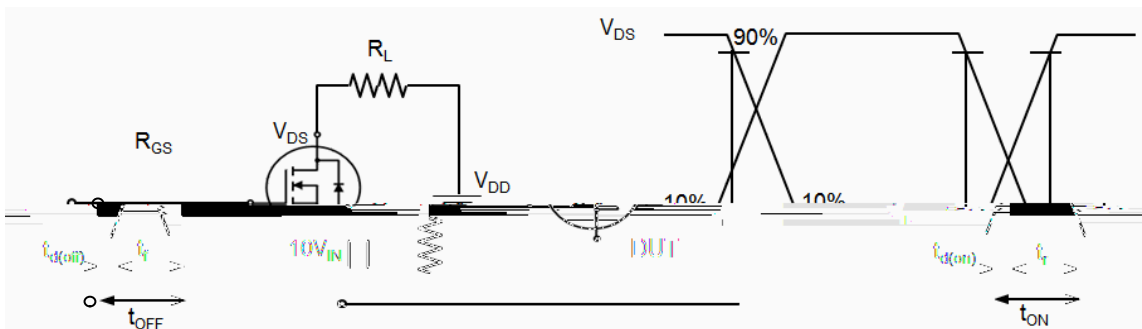
Figure 9: Capacitance Characteristics



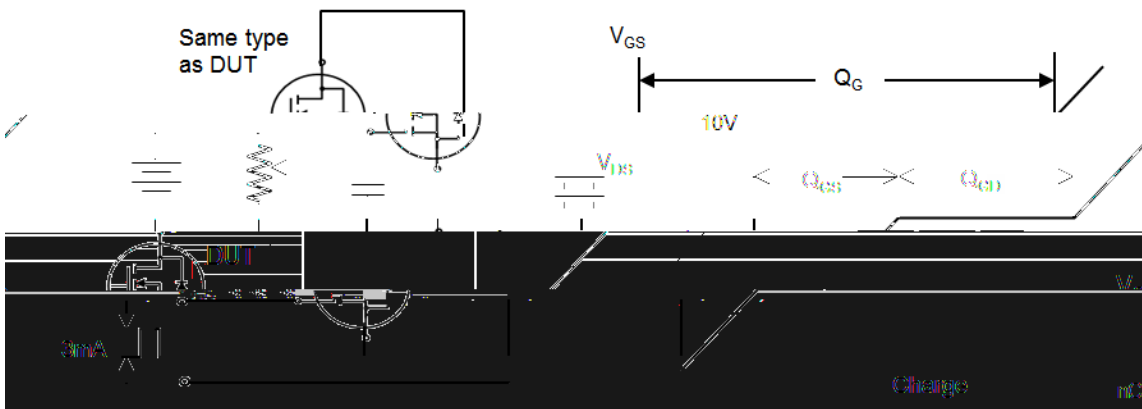
Avalanche Test Circuit



Switching Time Test Circuit



Gate Charge Test Circuit



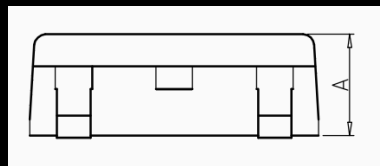
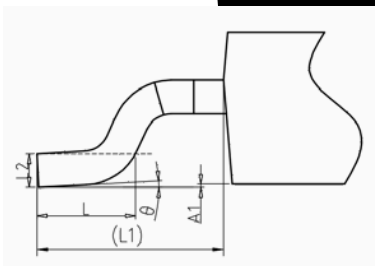
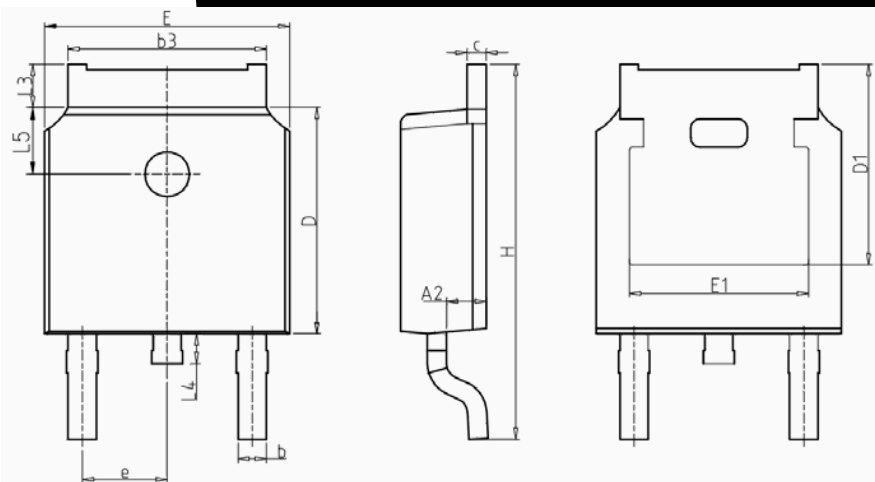
HY3003

Device Package

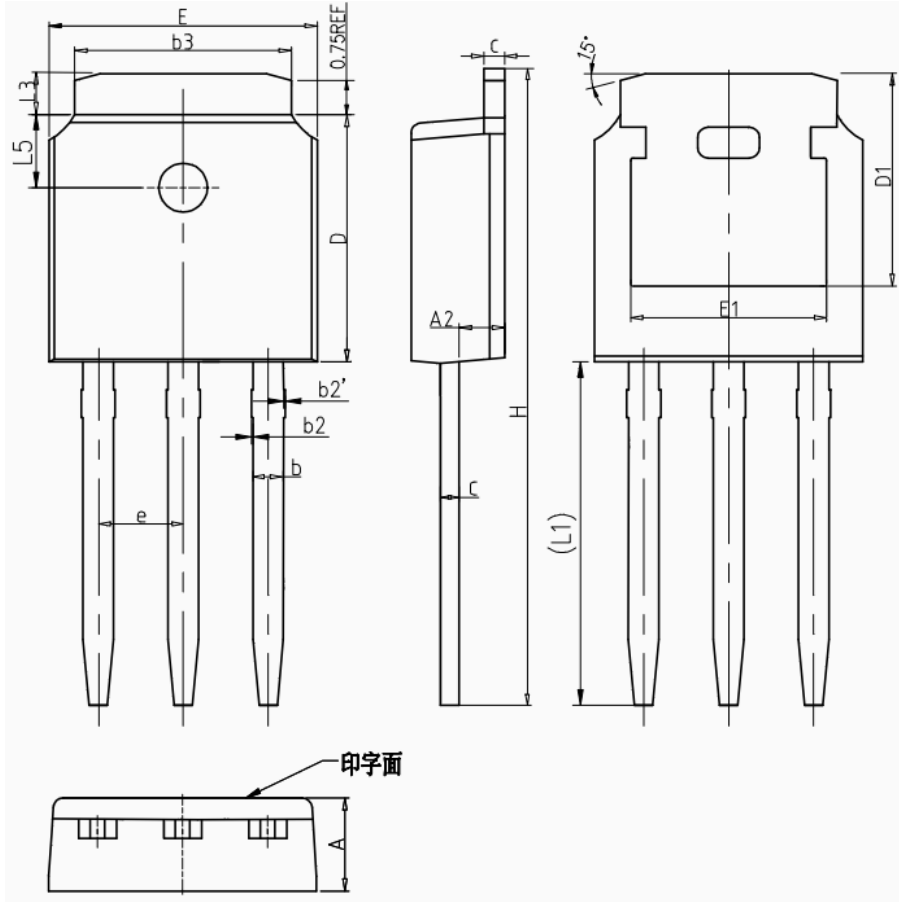
Package
TO-2
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TO-2

Package I

TO-252-2L

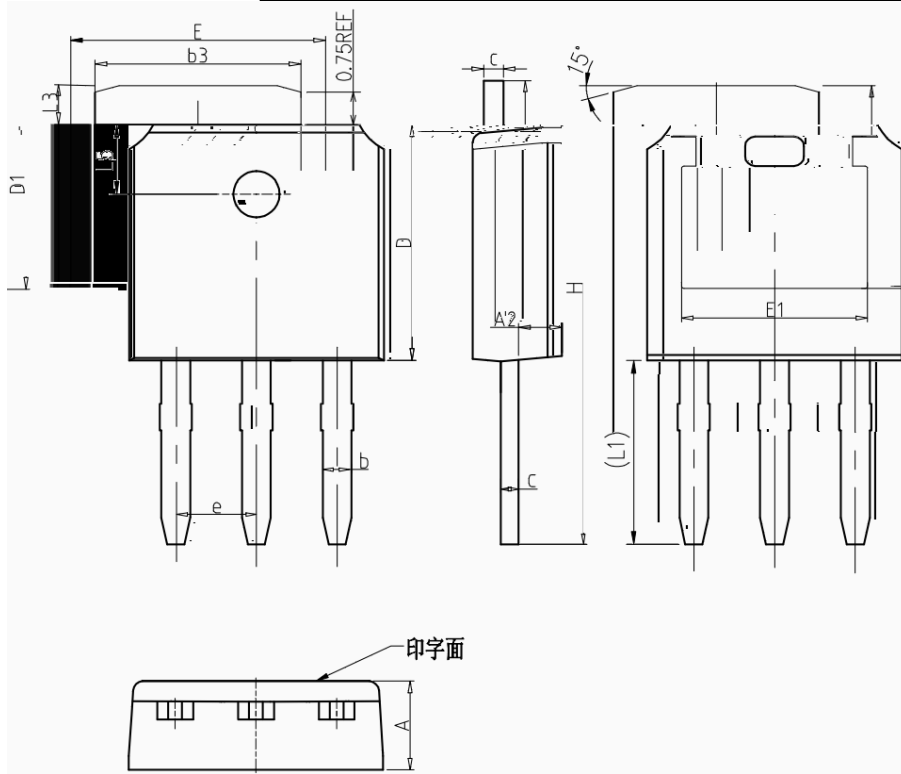


TO-251-3L



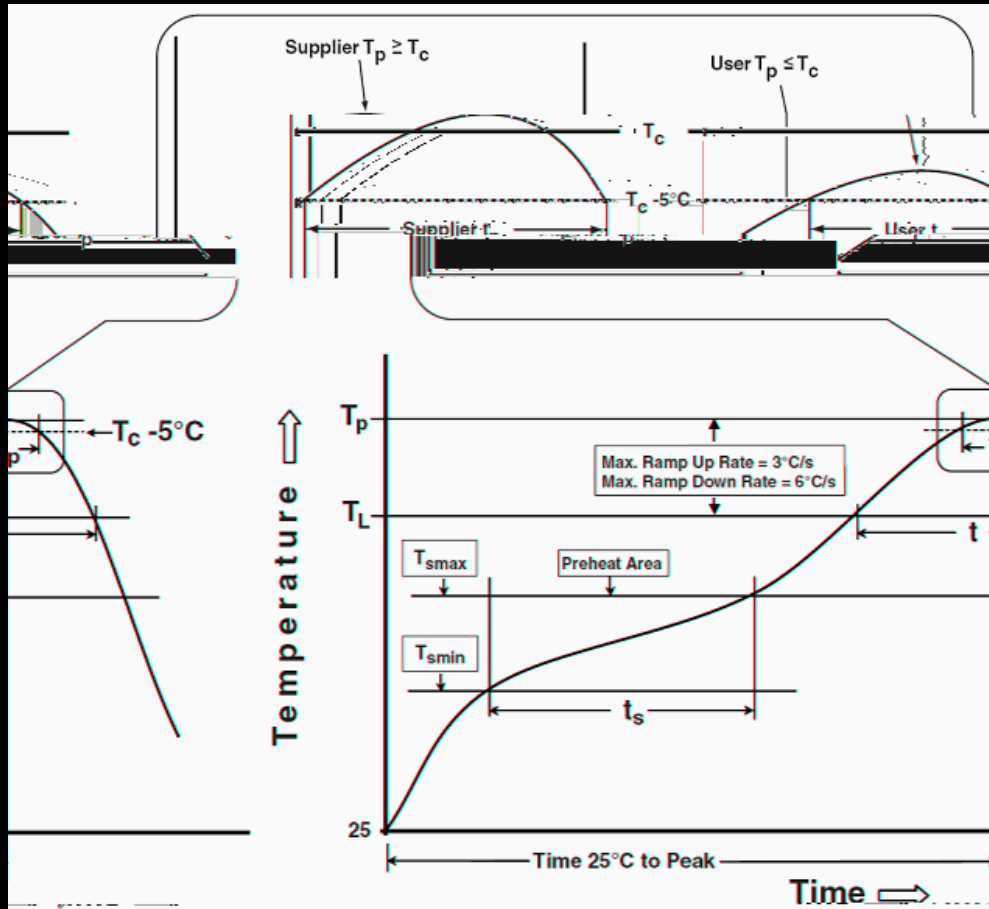
C

TO-251-3S



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A2
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C
D
D1
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E1
E2
F
F1
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F3
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Class



Class

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HY3003

Table 1. SnP

Table 2. P-free

Package
Thickness
<1.6
1.6 mm
≥2.

Reliability

Test
SOLDERABILITY
HTRB
PCT
TCT

Customer Service

Worldwide Sales and
Technical Support (Mexico)