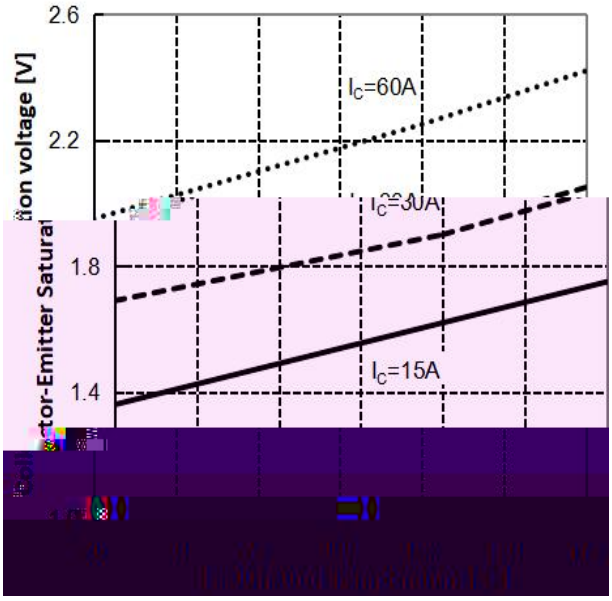
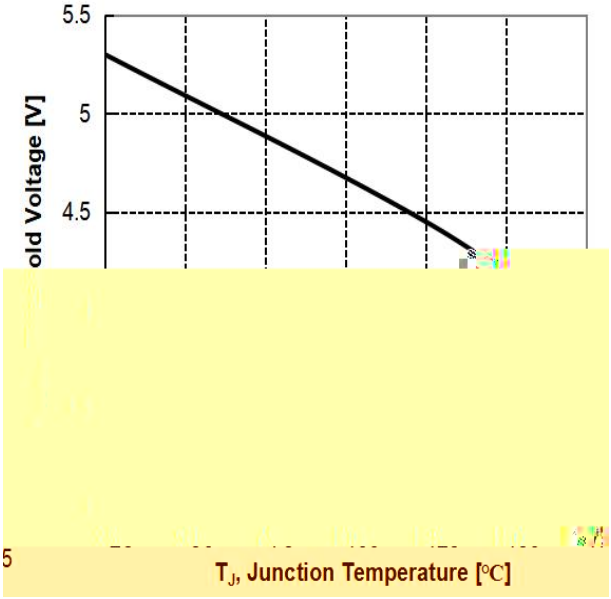
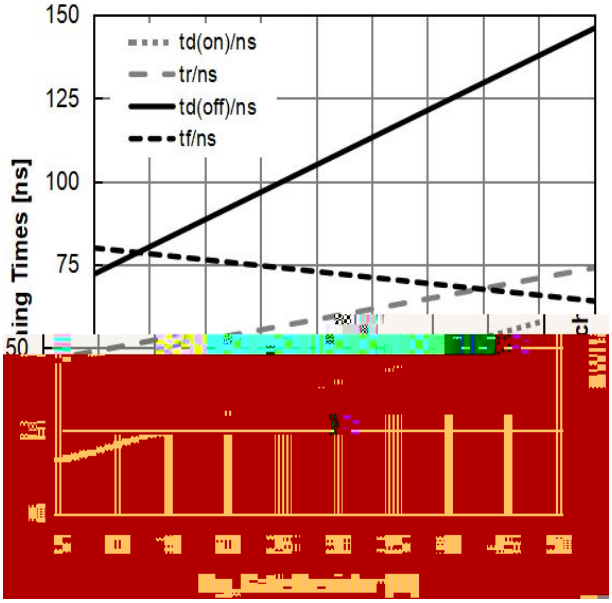
•

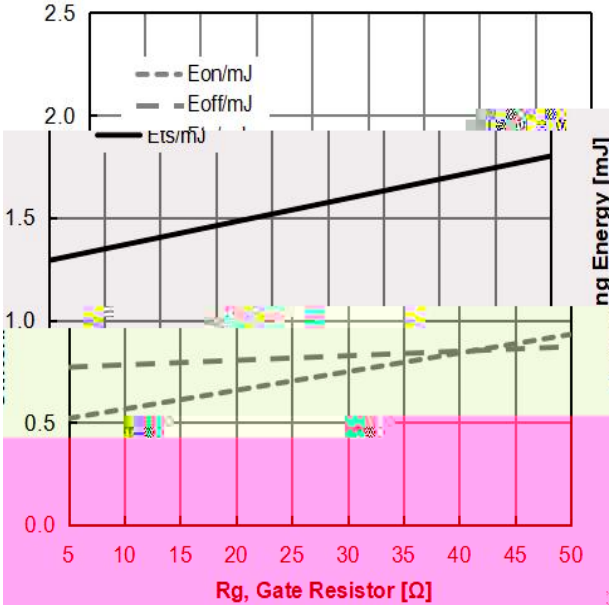
G C E

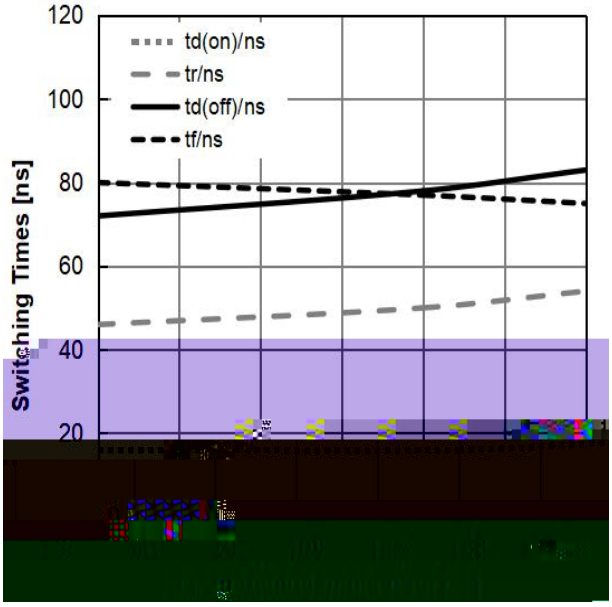
θ				
θ				
θ				

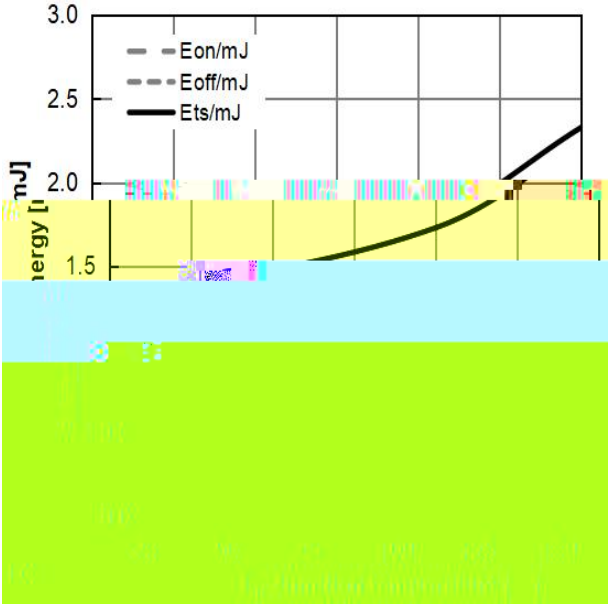

2.6
2.2
1.8
1.4
I_C=60A
I_C=30A
I_C=15A

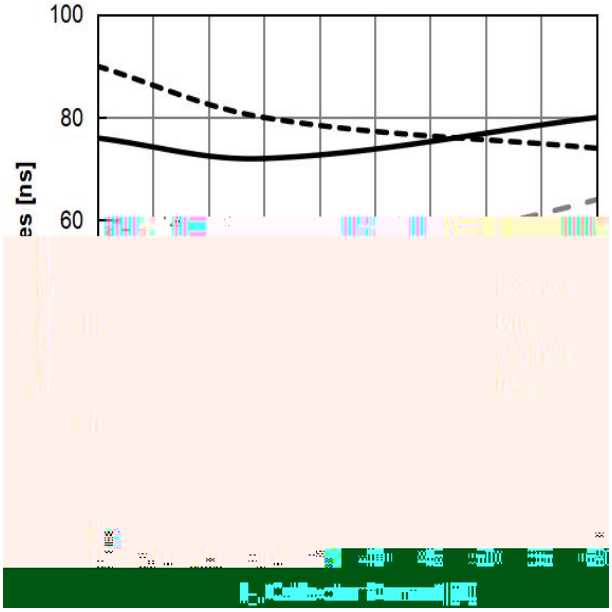

5.5
5
4.5
T_J, Junction Temperature [℃]

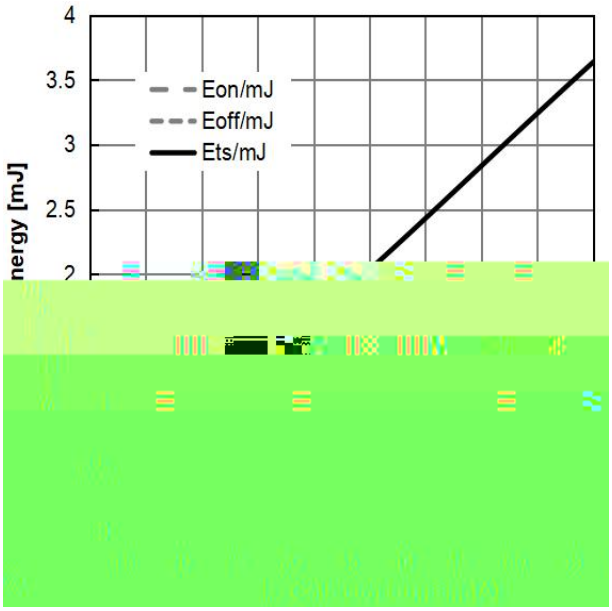

150
125
100
75
td(on)/ns
tr/ns
td(off)/ns
tf/ns

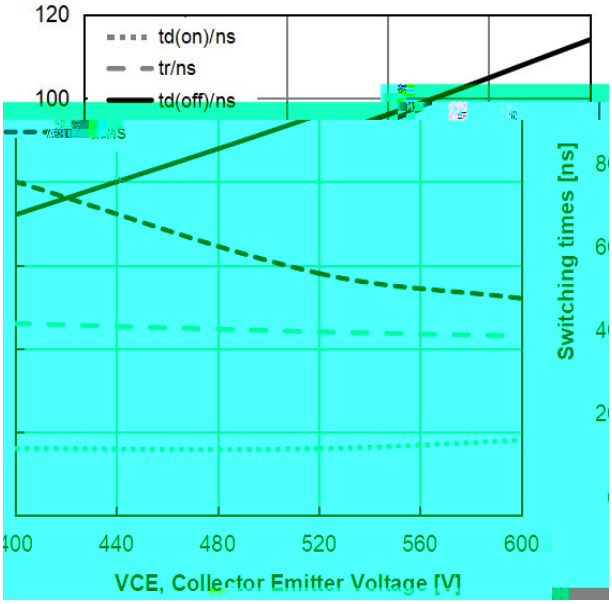

2.5
2.0
1.5
1.0
0.5
0.0
Eon/mJ
Eoff/mJ
5
10
15
20
25
30
35
40
45
50
Rg, Gate Resistor [Ω]

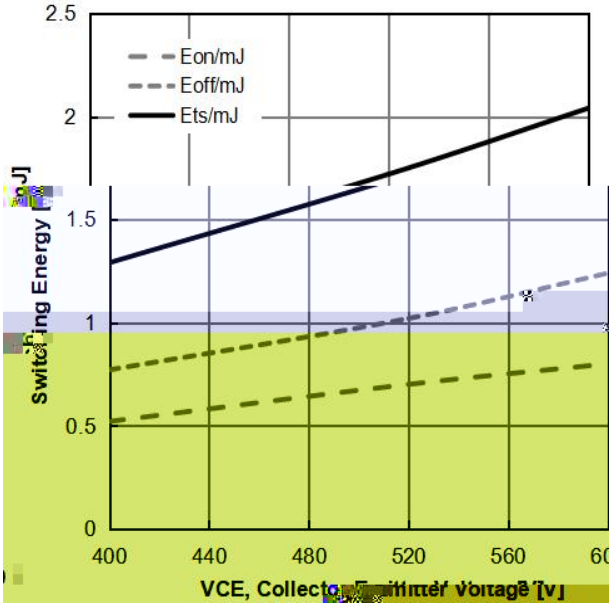

120
100
80
60
40
20
Switching Times [ns]
td(on)/ns
tr/ns
td(off)/ns
tf/ns

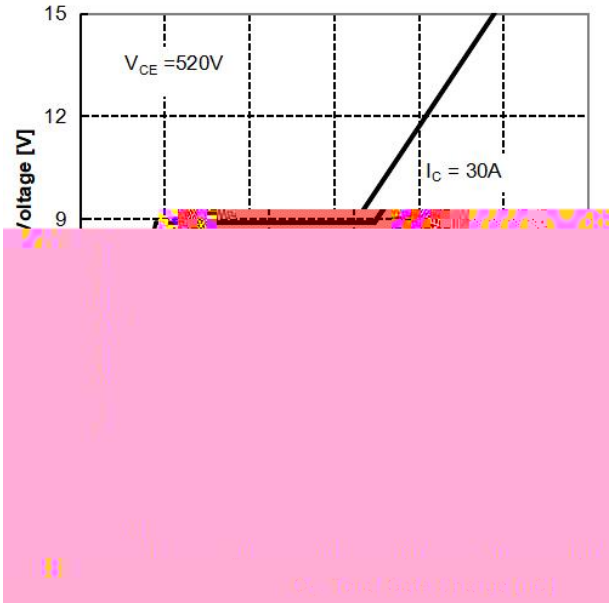

3.0
2.5
2.0
1.5
Eon/mJ
Eoff/mJ
Ets/mJ

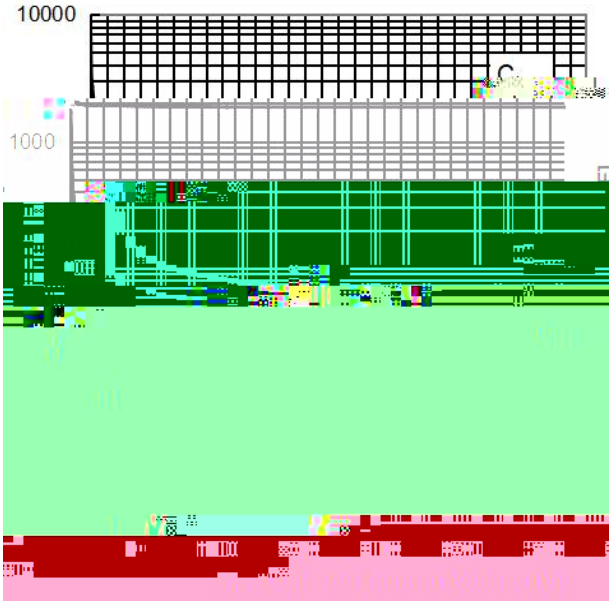

100
80
60

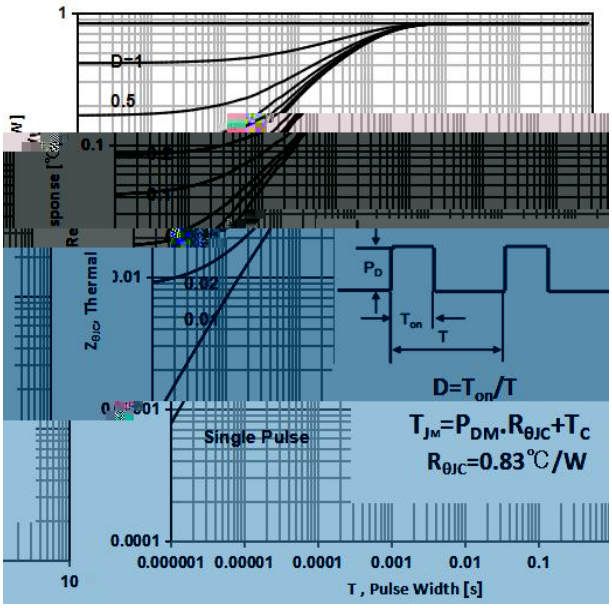

4
3.5
3
2.5
2
nergy [mJ]
Eon/mJ
Eoff/mJ
Ets/mJ

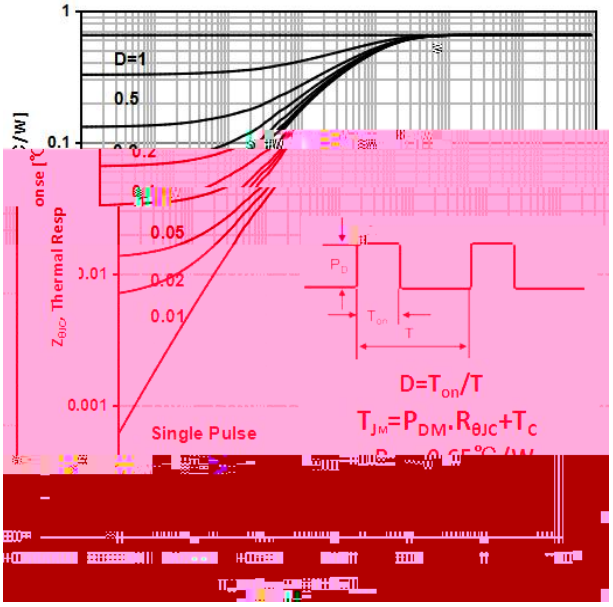

120
100
td(on)/ns
tr/ns
td(off)/ns
Switching times [ns]
400
440
480
520
560
600
VCE, Collector Emitter Voltage [V]

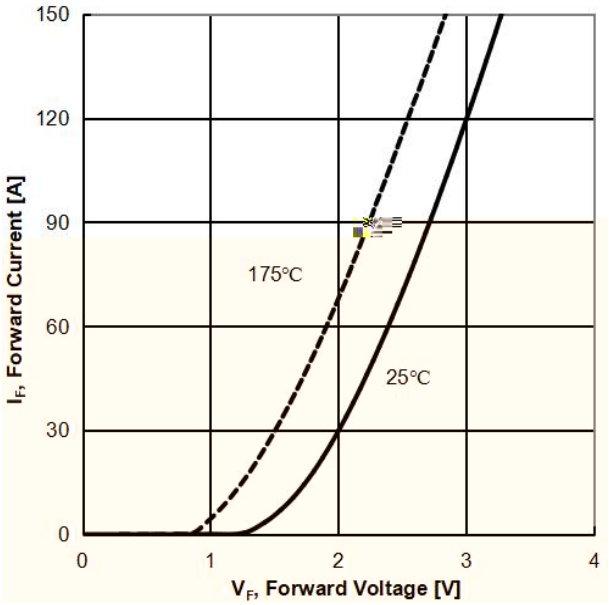

2.5
2
1.5
1
0.5
0
Eon/mJ
Eoff/mJ
Ets/mJ
400
440
480
520
560

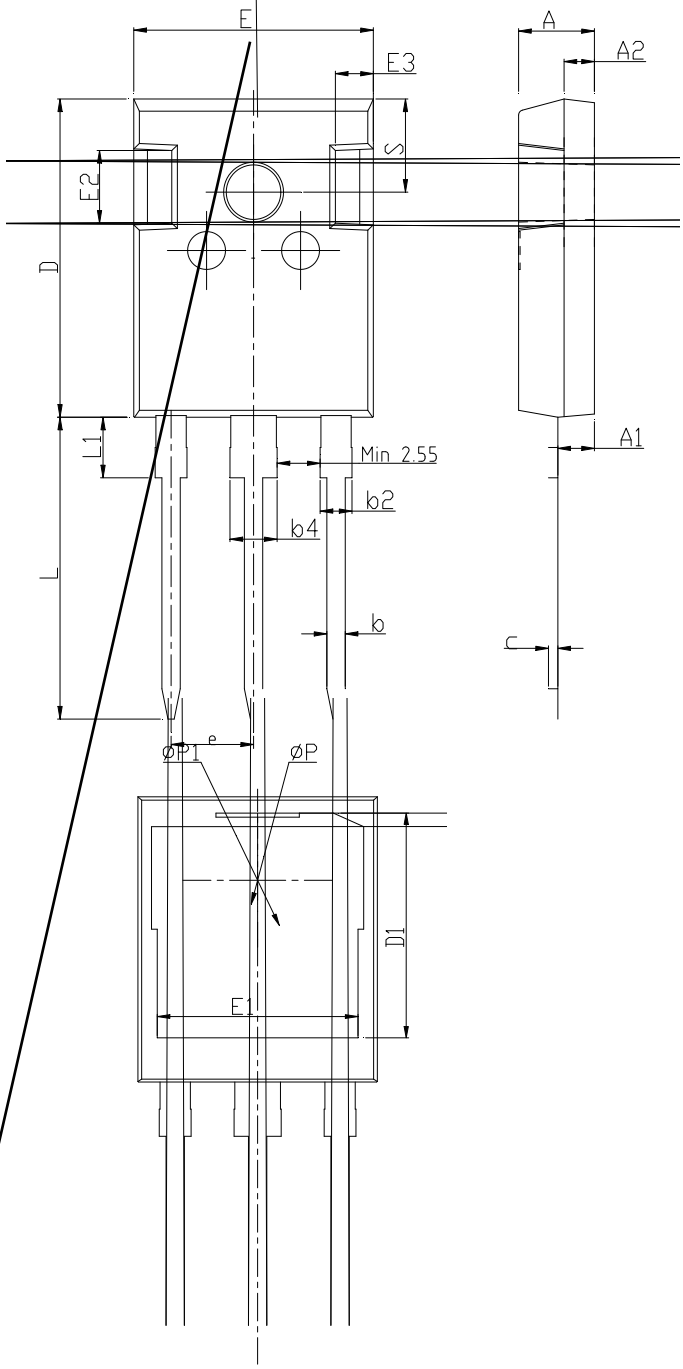

15
12
9
V_{CE} =520V
I_C = 30A

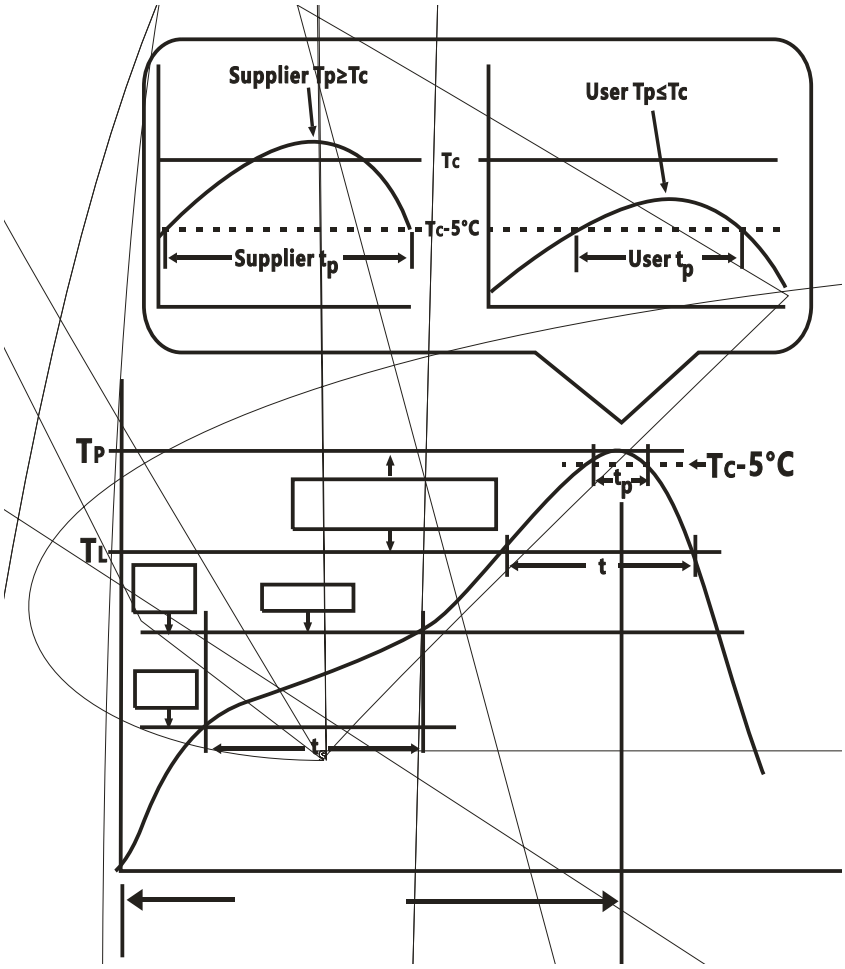

10000
1000


D=1
0.5
0.1
0.01
0.0001
Single Pulse
P_D
T_{on}
T
$D=T_{on}/T$
$T_{JM}=P_{DM}.R_{\theta JC}+T_C$
$R_{\theta JC}=0.83℃/W$
0.000001 0.00001 0.0001 0.001 0.01 0.1
T , Pulse Width [s]


D=1
0.5
0.1
0.05
0.02
0.01
0.001
Single Pulse
P_D
T_{on}
T
$D=T_{on}/T$
$T_{JM}=P_{DM}.R_{\theta JC}+T_C$


150
120
90
60
30
0
I_F, Forward Current [A]
175°C
25°C
0 1 2 3 4
V_F, Forward Voltage [V]


E
E3
A
A2
S
E2
D
L1
Min 2.55
A1
b2
b4
L
b
c
øP1
P
øP
D1
E1


Supplier Tp≥Tc
User Tp≤Tc
Tc
Tc-5°C
Supplier tp
User tp
TP
TL
Tc-5°C
tp
t
ts