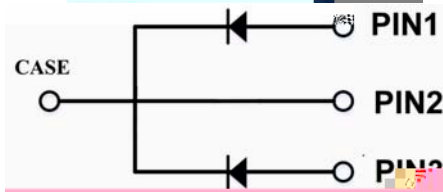
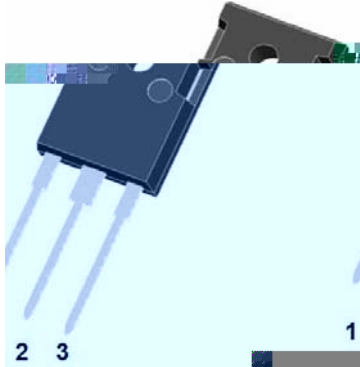


V_{RRM}	650V
I_F 135°C	26A ⁽²⁾
Q_C	60nC ⁽²⁾

Positive temperature coefficient
 Temperature-independent switching
 Maximum working temperature at 175 °C
 Unipolar devices and zero reverse recovery current
 Zero forward recovery current
 Essentially no switching losses
 Reduction of heat sink requirements
 High-frequency operation
 Reduction of EMI



Typical applications are in power factor correction(PFC), solar inverter, uninterruptible power supply, motor drives, photovoltaic inverter, electric car and charger.

: TO-247AB

Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free

: Tin plated leads

: As marked

($T_C=25$ Unless otherwise specified)

Device marking code			D106520NCTQG2
Reverse voltage (repetitive peak) @ $T_j=25^\circ\text{C}$	V_{RRM}	V	650
Reverse voltage (Surge Peak) @ $T_j=25^\circ\text{C}$	V_{RSM}	V	650
Reverse voltage (DC) @ $T_j=25^\circ\text{C}$	V_{DC}	V	650
Continuous forward current @ $T_c=25^\circ\text{C}$	I_F	A	27/54
Continuous forward current @ $T_c=135^\circ\text{C}$			13/26
Continuous forward current @ $T_c=150^\circ\text{C}$			10/20
Non-repetitive peak forward surge current @ $T_c=25^\circ\text{C}$, $t_p=10\text{ms}$, Half Sine Wave	I_{FSM}	A	80 ⁽¹⁾
Power Dissipation @ $T_c=25^\circ\text{C}$	P_{TOT}	W	112/230
Power Dissipation @ $T_c=110^\circ\text{C}$			48/100
i^2t Value @ $T_c=25^\circ\text{C}$, $t_p=10\text{ms}$	i^2dt	A ² S	32 ⁽¹⁾
Operating junction and Storage temperature range	T_j, T_{stg}	°C	-55 to +175

(1) Per Leg, (2) Per Device



(Per Leg)

Forward voltage drop	V_F	V	$I_F=10A, T_J=25^\circ C$	1.35	1.55
			$I_F=10A, T_J=175^\circ C$	1.8	-
Reverse leakage current	I_R	μA	$V_R=650V, T_J=25^\circ C$	0.5	25
			$V_R=650V, T_J=175^\circ C$	2	-
Total capacitive charge	Q_C	nC	$V_R=400V, T_J=25^\circ C, Q_C=\int_0^{V_R} I_C(V)dV$	30	-
Total capacitance	C	μF	$V_R=0V, f=1MHz$	543	-
			$V_R=200V, f=1MHz$	55	-
			$V_R=400V, f=1MHz$	52	-
Capacitance Stored Energy	E_C	μJ	$V_R=400V$	3.7	-

($T_a=25$ Unless otherwise specified)

Thermal resistance	R_{J-C}	$^\circ C/W$	1.34 ⁽¹⁾ 0.65 ⁽²⁾

(1) Per Leg, (2) Per Device

(Per Leg)

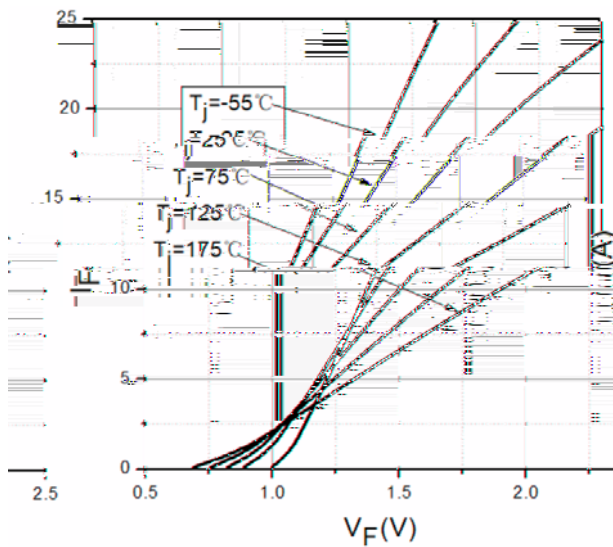


Figure 1. Forward Characteristics

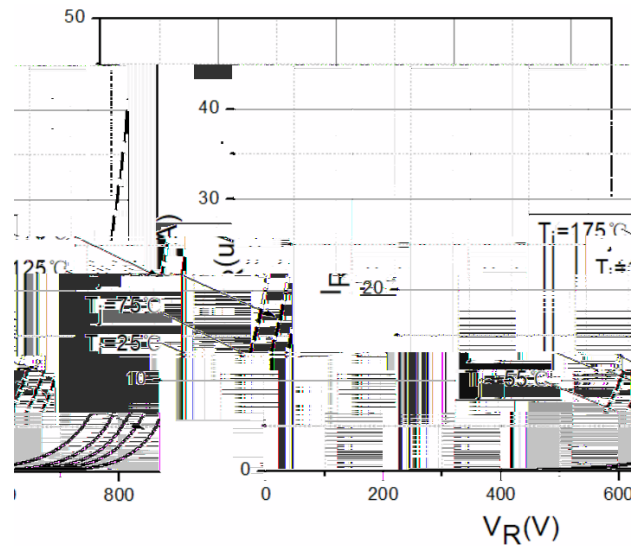


Figure2. Reverse Characteristic

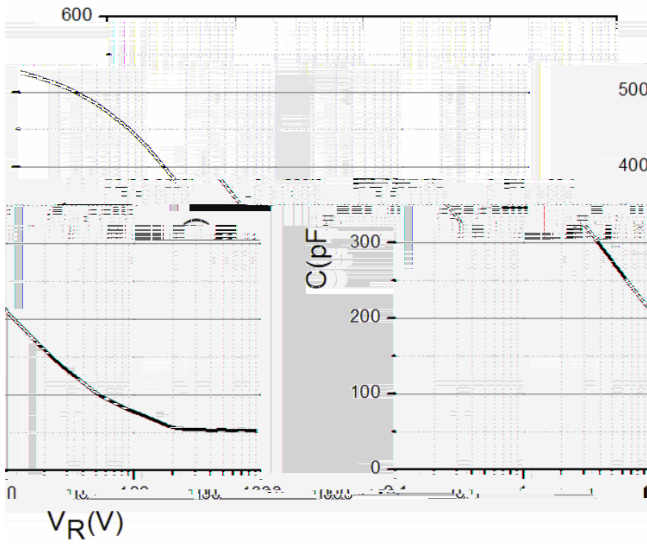


Figure 3. Capacitance vs. Reverse Voltage

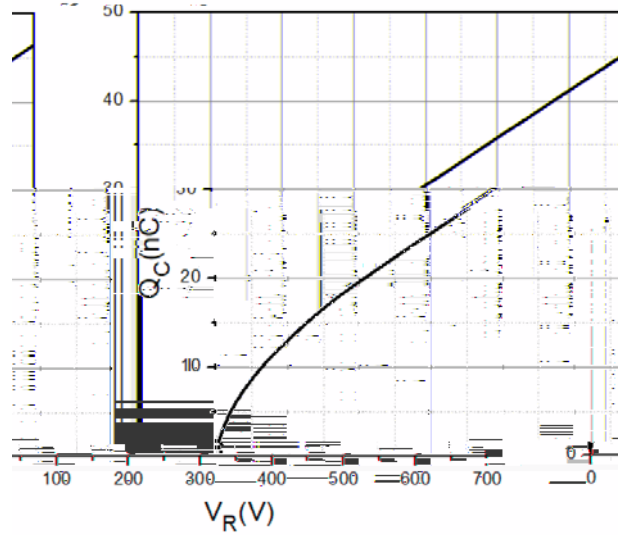


Figure 4. Total Capacitance Charge vs. Reverse Voltage

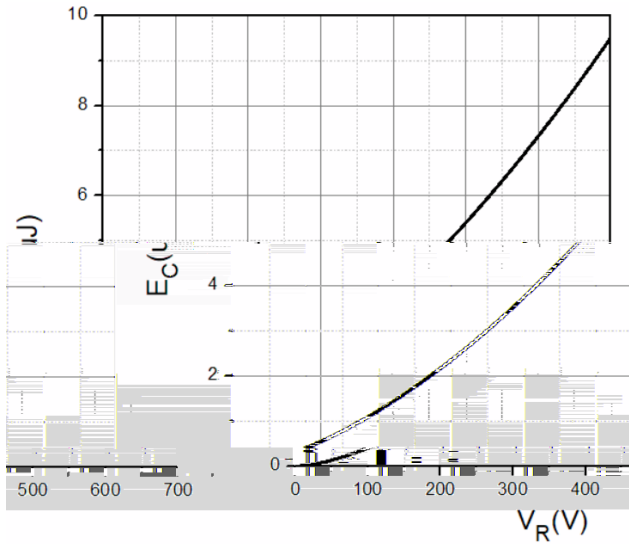


Figure 5. Capacitance Stored Energy

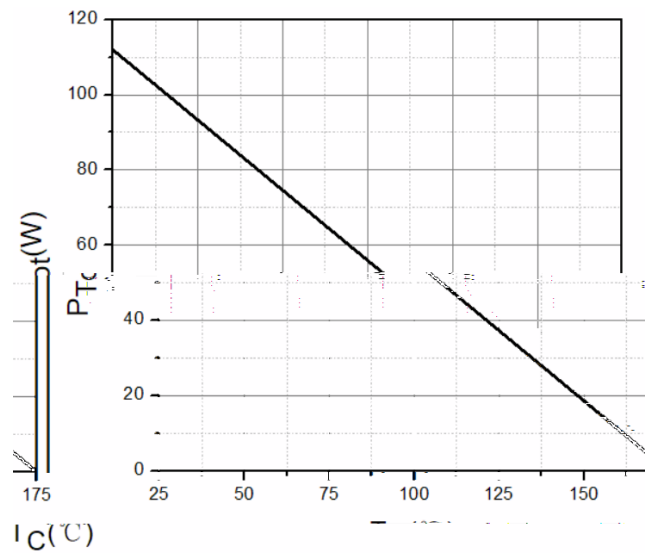


Figure 6. Power Derating

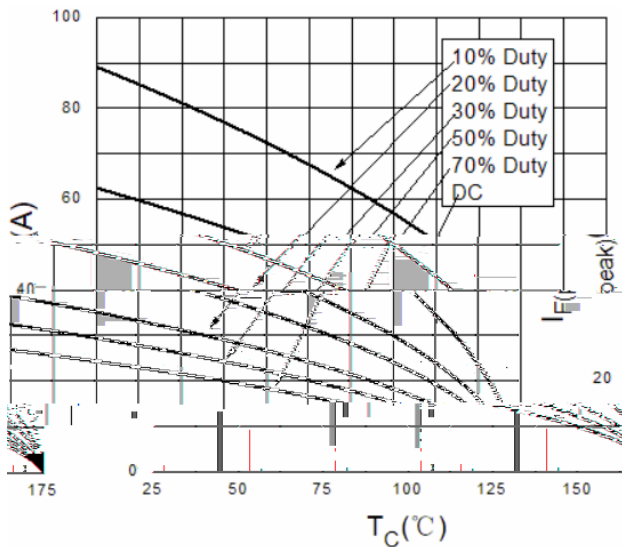


Figure 7. Current Derating

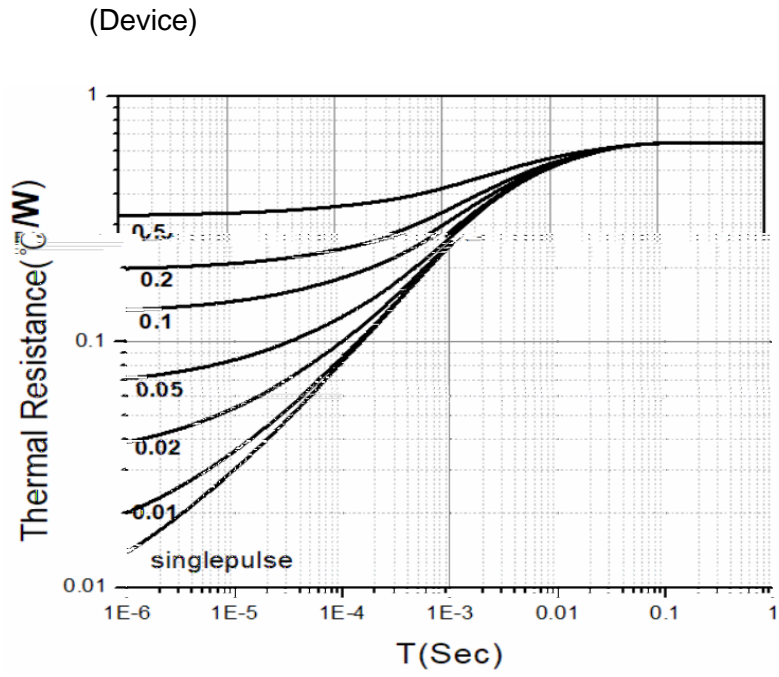
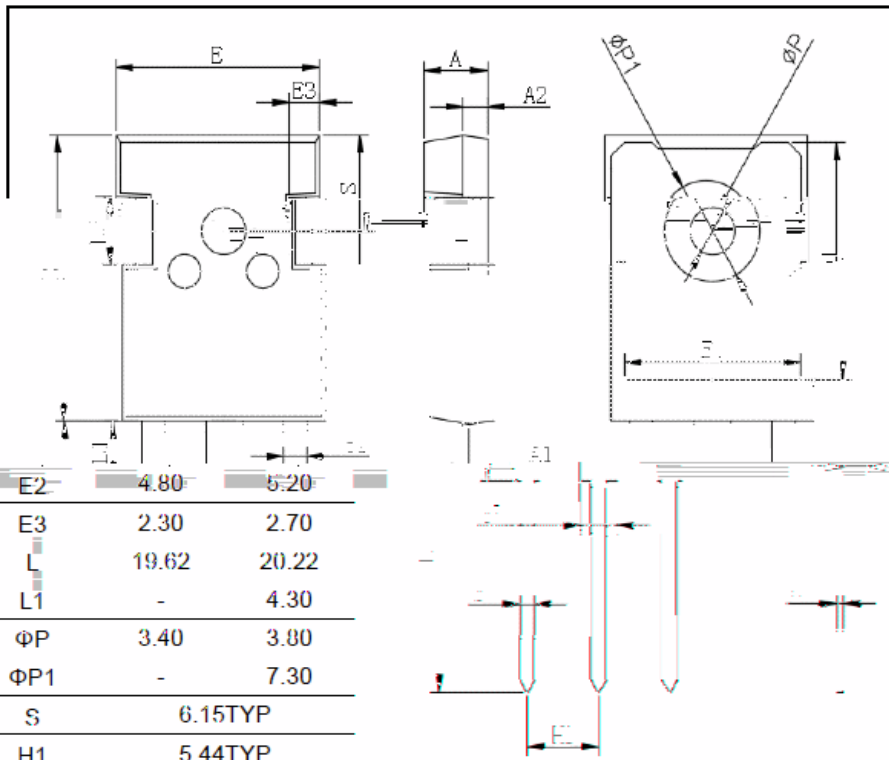


Figure 8. Transient Thermal Impedance



TO-247AB		
Dim	Min	Max
A	4.80	5.20
A1	2.21	2.61
A2	1.85	2.15
lb	1.0	1.4
b2	1.91	2.21
C	0.5	0.7
D	20.70	21.30
D1	16.25	16.85
E	15.50	16.10
E1	13.0	13.6

E2	4.80	5.20
E3	2.30	2.70
L	19.62	20.22
L1	-	4.30
ΦP	3.40	3.80
ΦP1	-	7.30
S	6.15TYP	
H1	5.44TYP	
b3	2.80	3.20



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