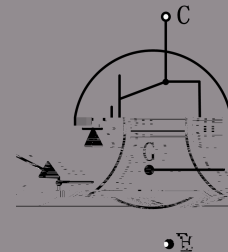
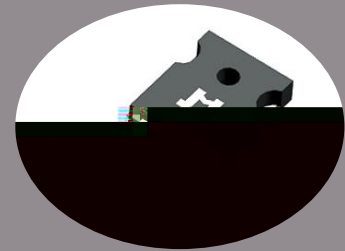


- $V_{CE}=1200V$
- $I_C=50A@T_C=100$
- $V_{CE(sat)}=1.7V$

TO-247

- Trench and field-stop technology
- High speed switching
- Low collector to emitter saturation voltage
- Easy parallel switching capability
- Short circuit withstands time  $10\mu s$
- High ruggedness performance
- RoHS compliant



- Inverter
- Motor driver

Type	Marking	Package	Packaging Method
JJT50N120SE	T50120SE	TO-247	Tube

M





( $T_{vj}=25$  unless otherwise specified)

$V_F$	Diode forward voltage	$I_F=50A$	-	2.2	-	V
		$I_F=50A \quad T_{vj}=175$	-	1.8	-	V
$t_{rr}$	Diode reverse recovery time	$V_R=600V$ $I_F=50A$ $di_F/dt=-750A/\mu s$	-	174	-	ns
$I_{rrm}$	Diode peak reverse recovery current		-	25	-	A
$Q_{rr}$	Diode reverse recovery charge		-	2096	-	nC
$t_{rr}$	Diode reverse recovery time	$V_R=600V$ $I_F=50A$ $di_F/dt=-750A/\mu s$ $T_{vj}=175$	-	299	-	ns
$I_{rrm}$	Diode peak reverse recovery current		-	39	-	A
$Q_{rr}$	Diode reverse recovery charge		-	5731	-	nC

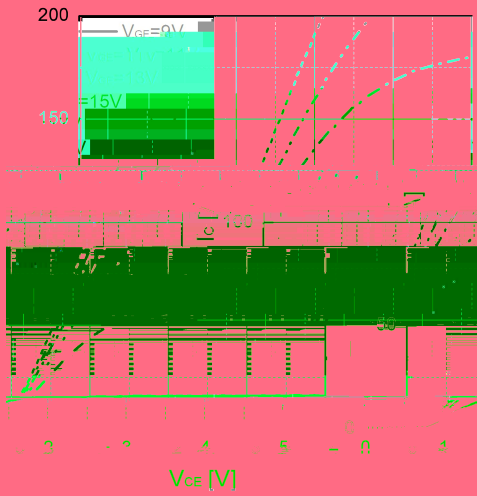


Fig 1. Typical output characteristic ( $T_{vj}=25$  )

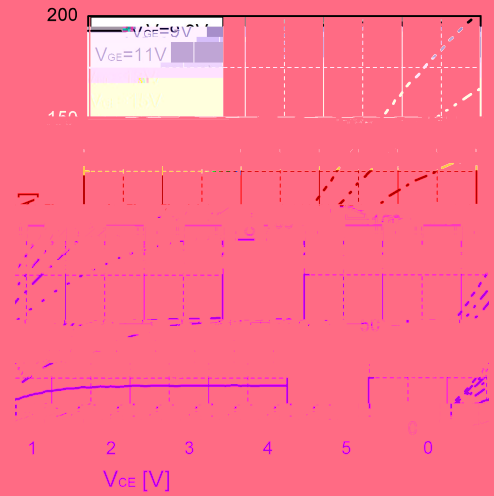


Fig 2. Typical output characteristic( $T_{vj}=175$  )

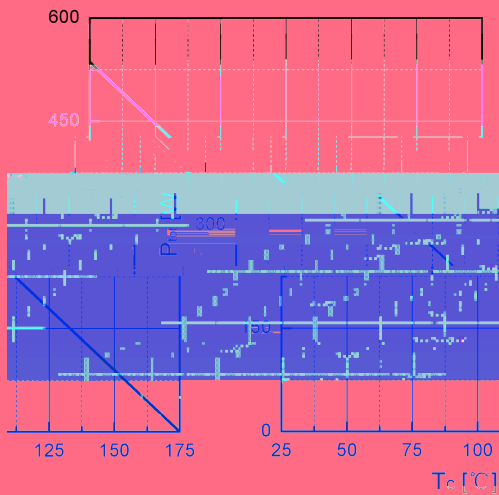


Fig 3. Power dissipation as a function of  $T_C$

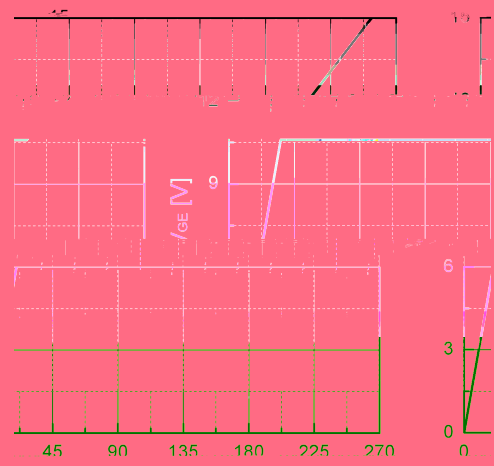


Fig 4. Typical Gate charge

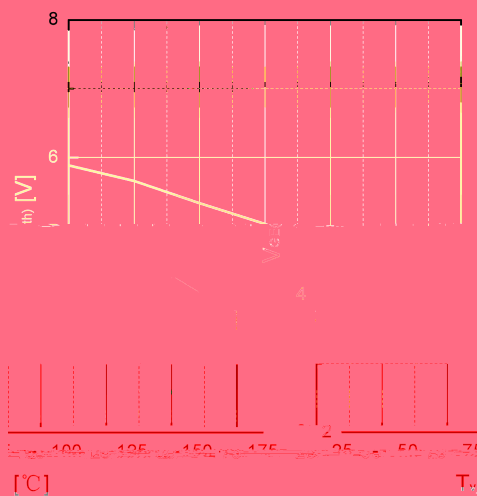


Fig 5. Typical  $V_{GE(th)}$  as a function of  $T_{vj}$   
( $I_C=1mA$ )

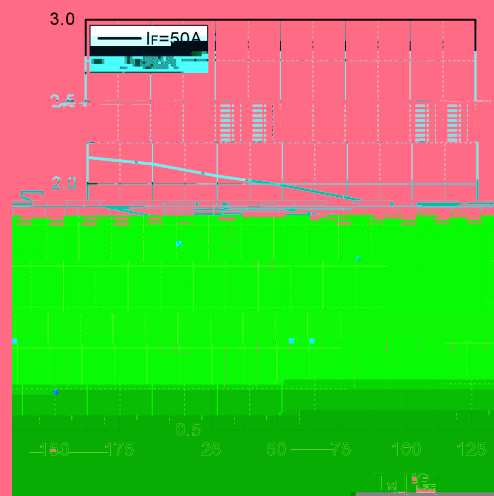


Fig 6. Typical  $V_F$  as a function of  $T_{vj}$

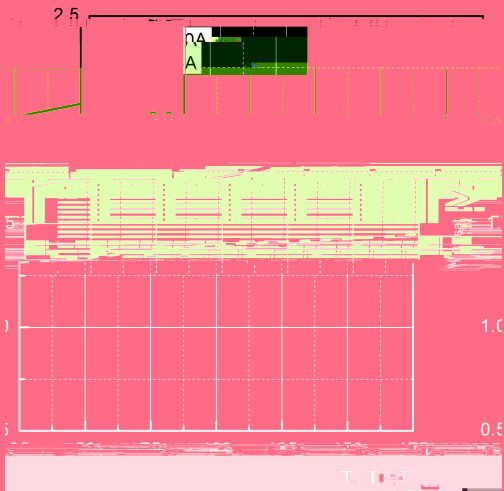


Fig 7. Typical  $V_{CEsat}$  as a function of  $T_{vj}$

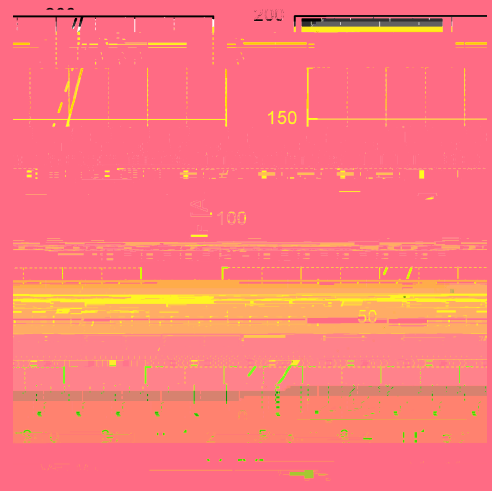


Fig 8. Typical  $I_F$  as a function of  $V_F$

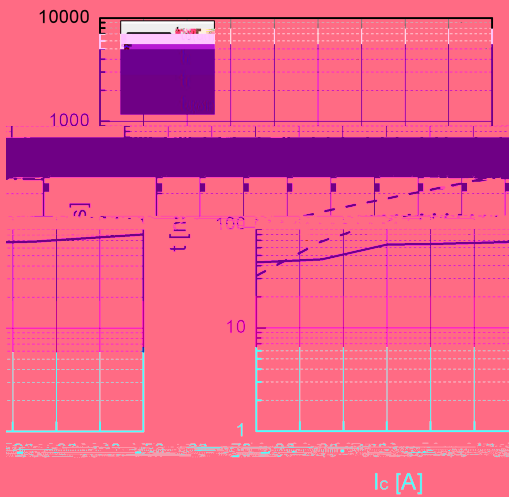


Fig 9. Typical switching time as a function of  $I_C$

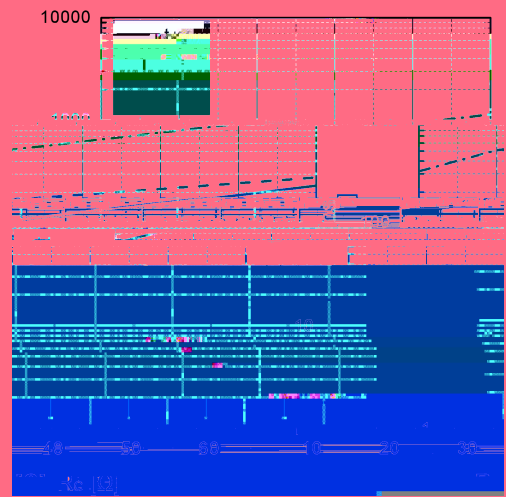


Fig 10. Typical switching times as a function of  $R_G$

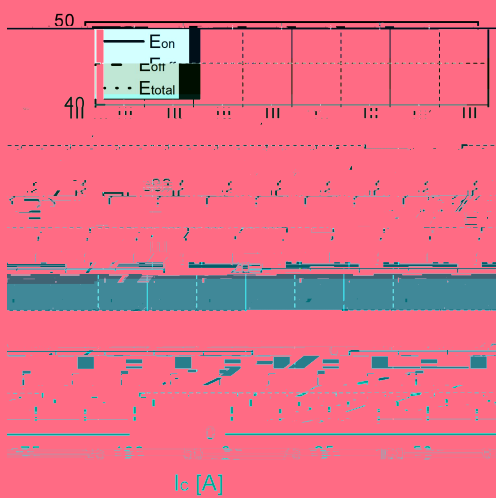


Fig 11. Typical switching energy losses as a function of  $I_C$

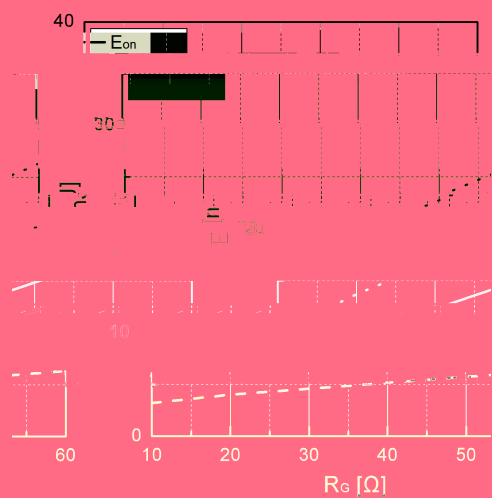


Fig 12. Typical switching energy losses as a function of  $R_G$







Date	Revision	Changes
2025-04-08	Rev 1.0	Release of the preliminary datasheet.
2025-04-30	Rev 1.1	Add graph and character update

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