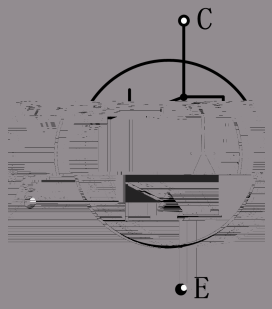
- V_{CE}=650V
- I_C=10A@ T_C=100
- $V_{CE(sat)}$=1.8 V

TO-252

- High ruggedness performance
- 10μs short circuit capability
- Positive $V_{CE\ (sat)}$ temperature coefficient
- High efficiency for motor control
- Excellent current sharing in parallel operation
- RoHS compliant



- Home appliances
- Motor drives

Type	Marking	Package	Packaging method
JJT10N65ST	T1065ST	TO-252	Tape and reel

V_{CES}	Collector-emitter voltage	650	V
V_{GES}	Gate-emitter voltage	±20	V
I_C	Continuous collector current (T_C=25)	20	A
	Continuous collector current (T_C=100)	10	A
I_{CM}	Pulsed collector current, t_p limited by T_{vjmax}	40	A
I_F	Diode continuous forward current (T_C=100)	10	A
I_{FM}	Diode maximum current, t_p limited by T_{vjmax}	40	A
t_{sc}	Short circuit withstand time	10	µs
P_{tot}	Power dissipation (T_C=25)	75	W
	Power dissipation (T_C=100 ŭe Z7		

$V_{(BR)CES}$	Collector-emitter breakdown voltage	V_{GE}=0V, I_C=250μA	650	-	-	V
I_{CES}	Collector-emitter leakage current	V_{CE}=650V, V_{GE}=0V	-	-	50	μA
I_{GES}	Gate leakage current, forward	V_{GE}=20V, V_{CE}=0V	-	-	100	nA
	Gate leakage current, reverse	V_{GE}=-20V, V_{CE}=0V	-	-	-100	nA

G

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

$_{F}$	Diode forward voltage	$_{F}$=10A	-	1.4	-	V
		$_{F}$=10A, $_{vj}$=175	-	1.2	-	V
$_{rr}$	Diode reverse recovery time	$_{R}$=400V $_{F}$=10A d $_{F}$/d =-750A/μs	-	57	-	ns
$_{rrm}$	Diode peak reverse recovery current		-	12	-	A
$_{rr}$	Diode reverse recovery charge		-	411	-	nC
$_{rr}$	Diode reverse recovery time	$_{R}$=400V $_{F}$=10A d $_{F}$/d =-750A/μs $_{vj}$=175	-	124	-	ns
$_{rrm}$	Diode peak reverse recovery current		-	13	-	A
$_{rr}$	Diode reverse recovery charge		-	737	-	nC

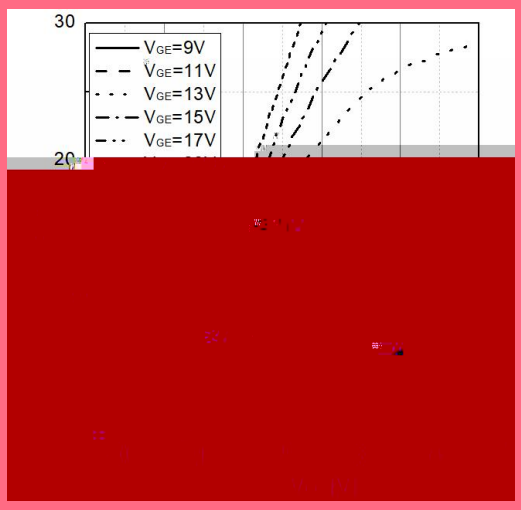


Fig 1. Typical output characteristic (vj=25)

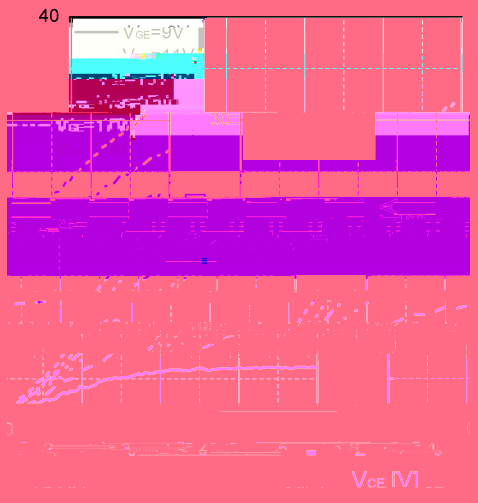


Fig 2. Typical output characteristic(vj=175)

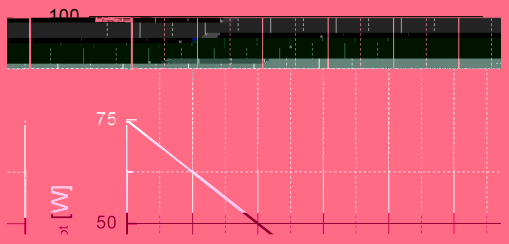


Fig 3. Power dissipation as a function of

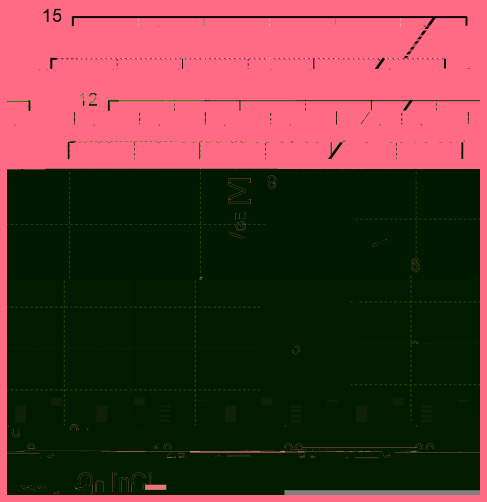


Fig 4. Typical Gate charge

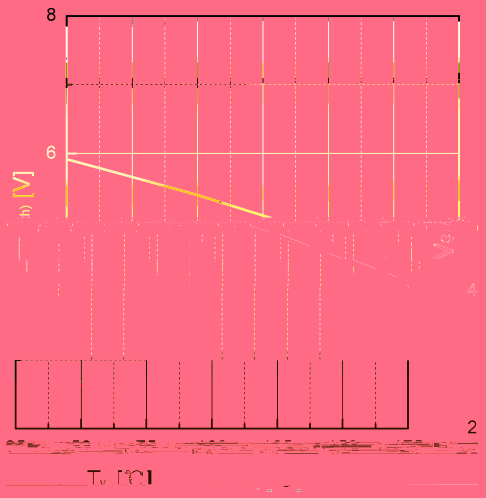


Fig 5. Typical GE(th) as a function of vj (C=1mA)

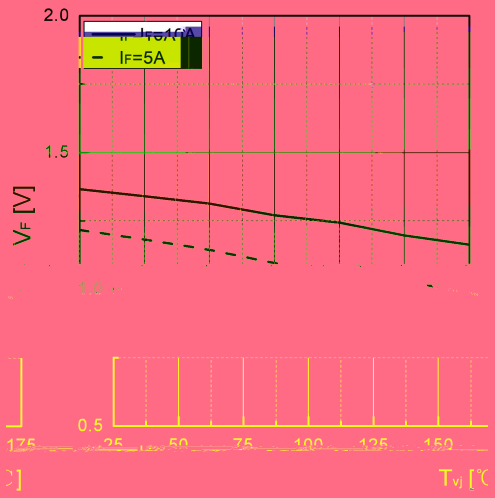


Fig 6. Typical F as a function of vj

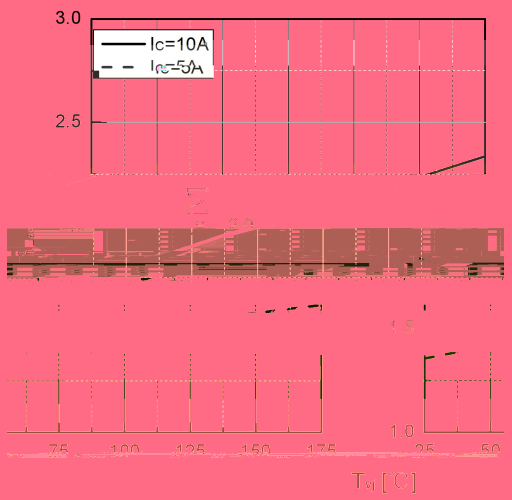


Fig 7. Typical $_{CEsat}$ as a function of $_{vj}$

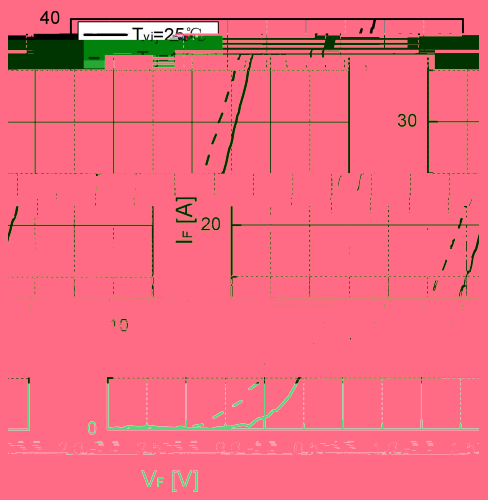


Fig 8. Typical $_{F}$ as a function of $_{F}$

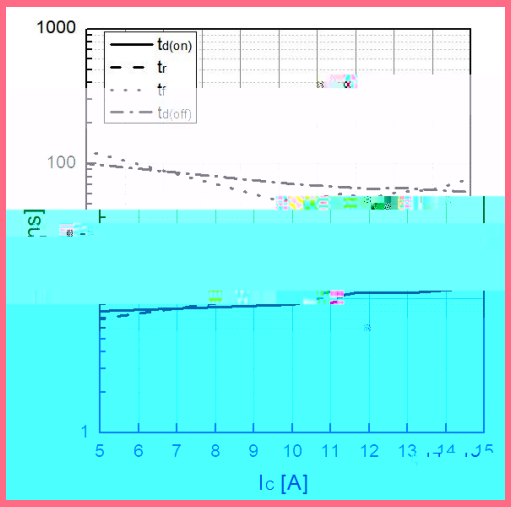


Fig 9. Typical switching time as a function of $_{C}$

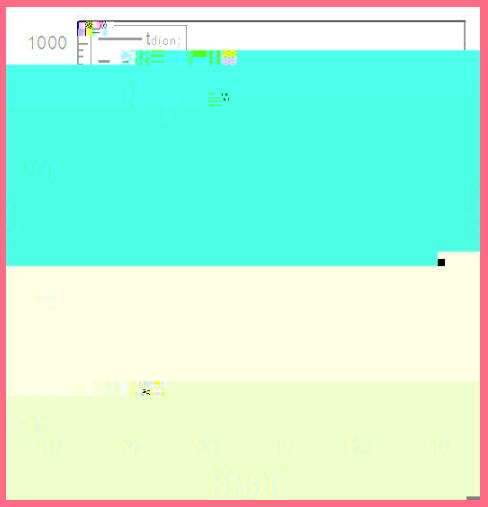


Fig 10. Typical switching times as a function of $_{G}$

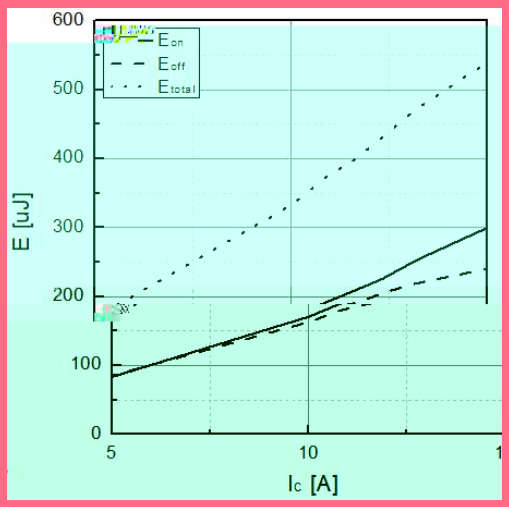


Fig 11. Typical switching energy losses as a function of $_{C}$

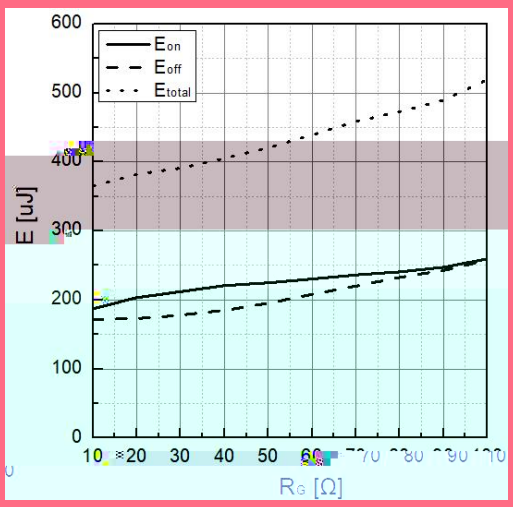
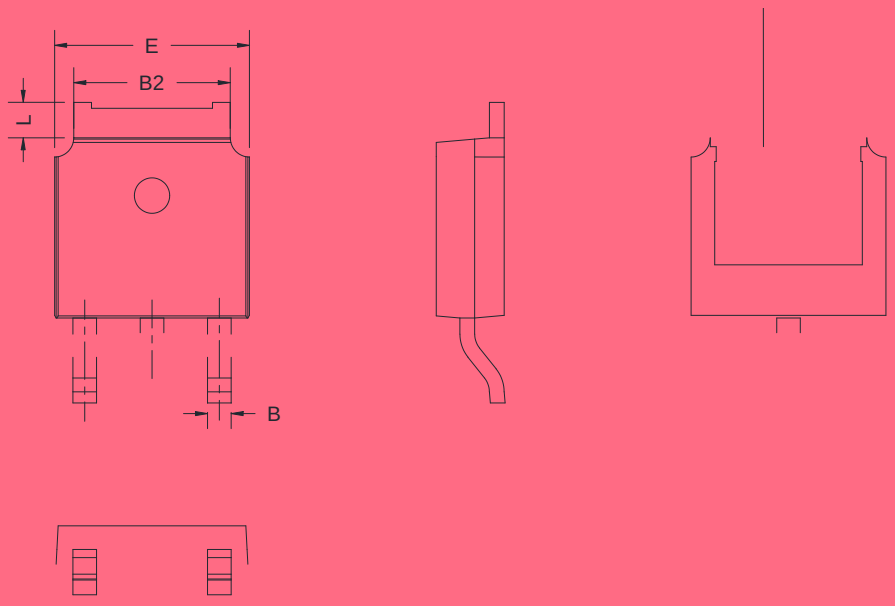


Fig 12. Typical switching energy losses as a function of $_{G}$



Update

Date	Revision	Changes
2023-12-23		Online
2025-02-06	Rev 1.1	Update
2025-04-08	Rev 1.2	Character Update