

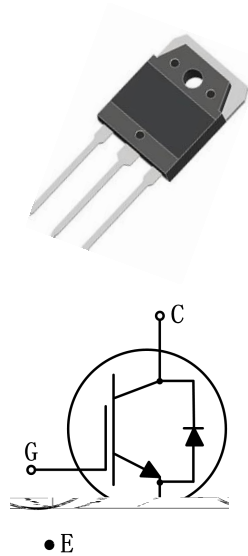
- $V_{CE} = 650V$
- $I_C = 40A @ T_C = 100$
- $V_{CE(sat)} = 1.55V$

- Trench and field-stop technology.
- Easy parallel switching capability.

- High efficiency for inverters.
- High ruggedness performance.
- RoHS compliant.

- PFC applications
- Welding machines

TO-3P



Type	Marking	Package	Packaging Method
JST40N65UH	ST4065UH	TO-3P	Tube



CES	Collector-emitter voltage	650	V
GES	Gate-emitter voltage	Ñ20	V
C	Continuous collector cur		



V_{CES}	Collector-emitter breakdown voltage	$V_{GE}=0V, I_C=250\mu A$	654
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($v_j=25$ unless otherwise specified)

F	Diode forward voltage	$I_F=40A$	-	2.0	-	V
		$I_F=40A, v_j=175$	-	1.8	-	V
t_{rr}	Diode reverse recovery time	$V_R=400V$ $I_F=40A$ $dI_F/dt=-500A/\mu s$	-	155	-	ns
I_{rrm}	Diode peak reverse recovery current		-	11	-	A
Q_{rr}	Diode reverse recovery charge		-	700	-	nC
t_{rr}	Diode reverse recovery time	$V_R=400V$ $I_F=40A$ $dI_F/dt=-500A/\mu s$ $v_j=175$	-	250	-	ns
I_{rrm}	Diode peak reverse recovery current		-	15	-	A
Q_{rr}	Diode reverse recovery charge		-	1738	-	nC

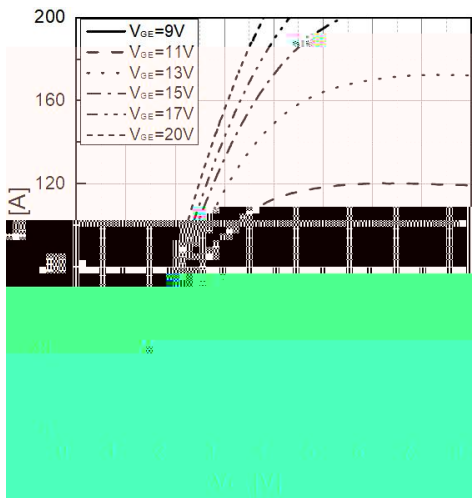


Fig 1. Typical output characteristic ($v_j=25$)

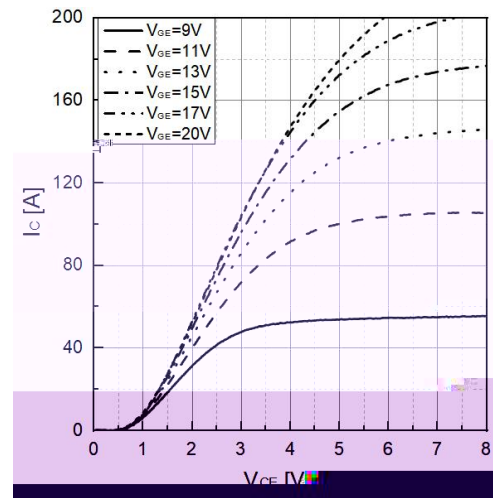


Fig 2. Typical output characteristic ($v_j=175$)

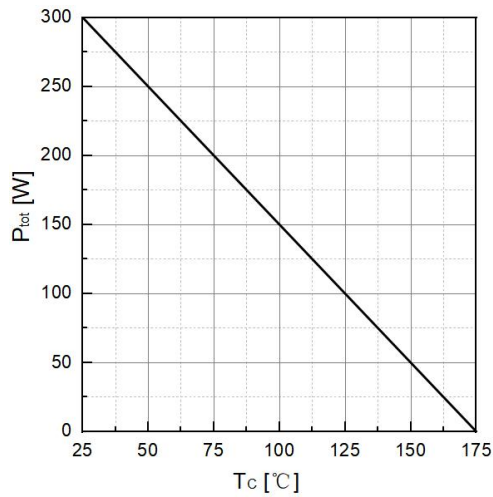


Fig 3. Power dissipation as a function of

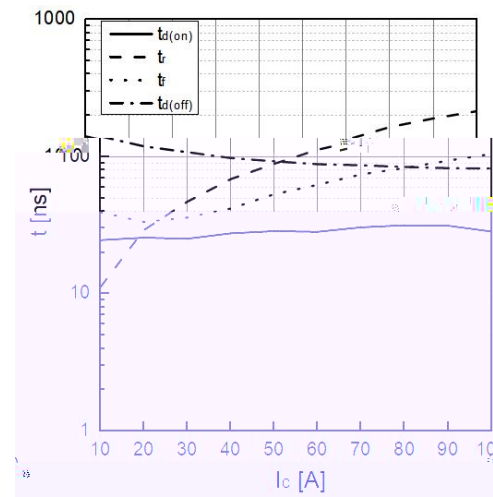


Fig 4. Typical switching time as a function of I_c

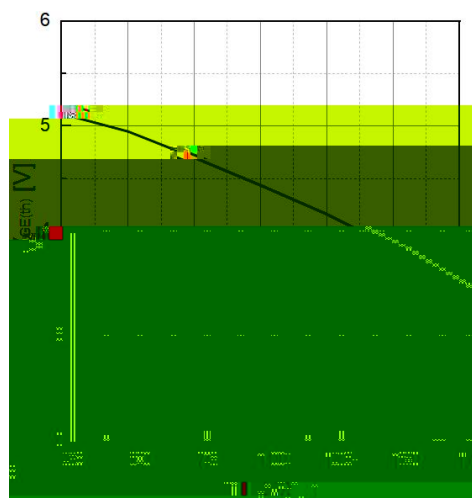


Fig 5. Typical $V_{GE(th)}$ as a function of v_j

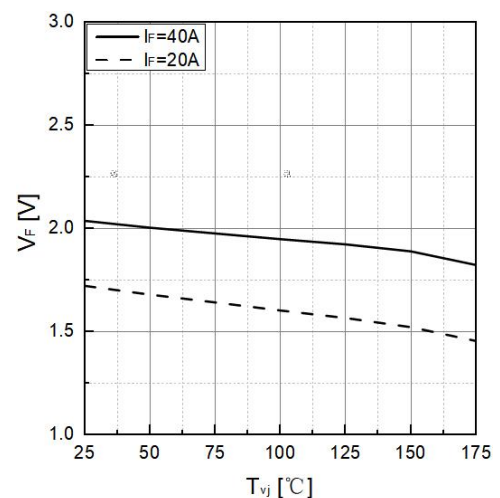


Fig 6. Typical V_F as a function of v_j

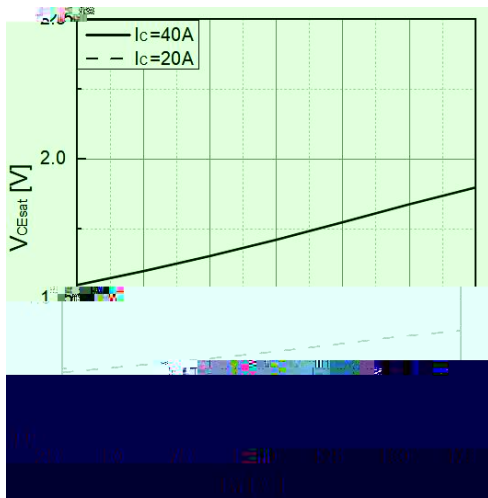


Fig 7. Typical V_{CEsat} as a function of v_j

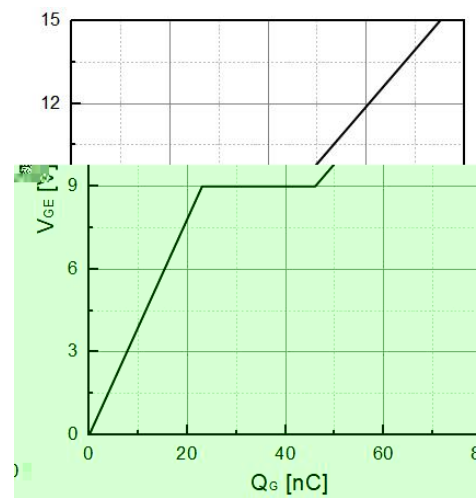


Fig 8. Typical Gate charge

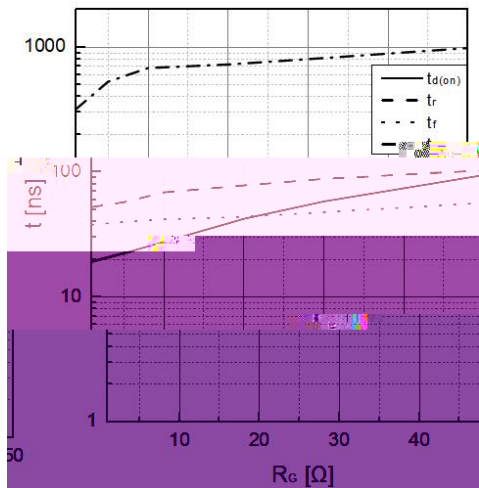


Fig 9. Typical switching time as a function of R_G

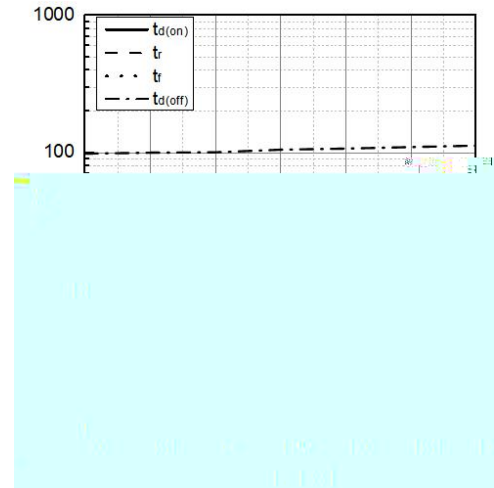


Fig 10. Typical switching time as a function of v_j

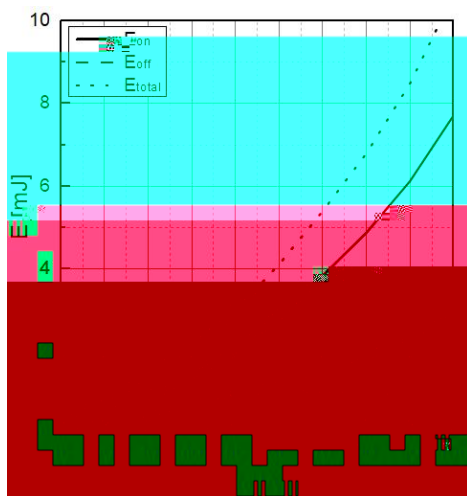


Fig 11. Typical switching energy losses as a function of v_c

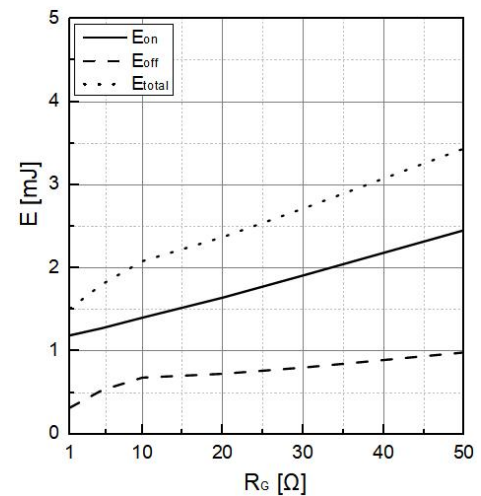


Fig 12. Typical switching energy losses as a function of R_G

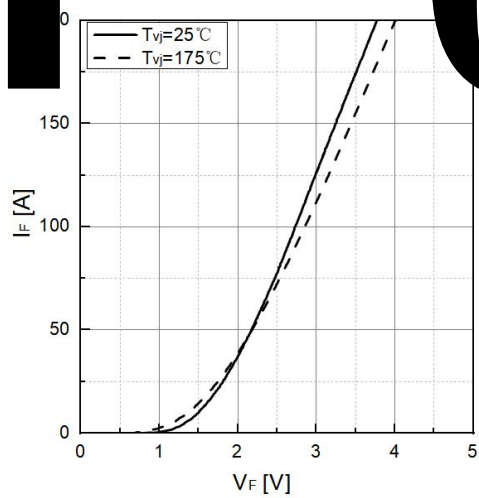


Fig 13. Typical I_F as a function of V_F

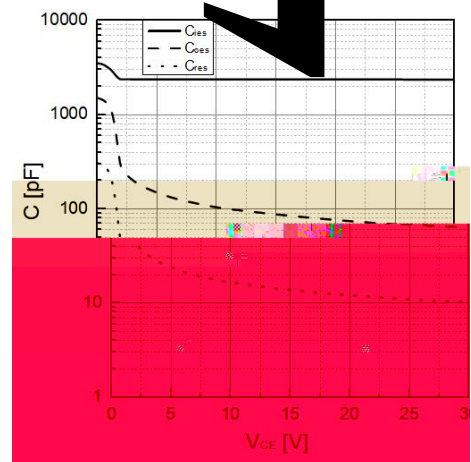


Fig 14. Typical capacitance as a function of V_{CE}
(f=1Mhz,



	MIN	MAX
A	15.00	16.00
B	19.20	20.60
C	4.60	5.00
D		



Date	Revision	Changes
2025-12-25	Rev 1.0	Release of the datasheet
2026-06-25	Rev 1.1	Update FRD thermal

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