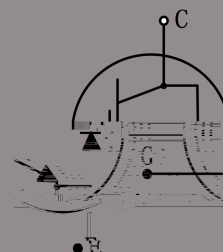
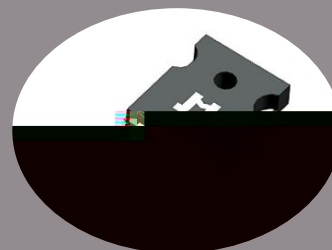


- $V_{CE} = 1200V$
- $I_C = 40A @ V_{CE} = 100$
- $V_{CE(sat)} = 1.9V$

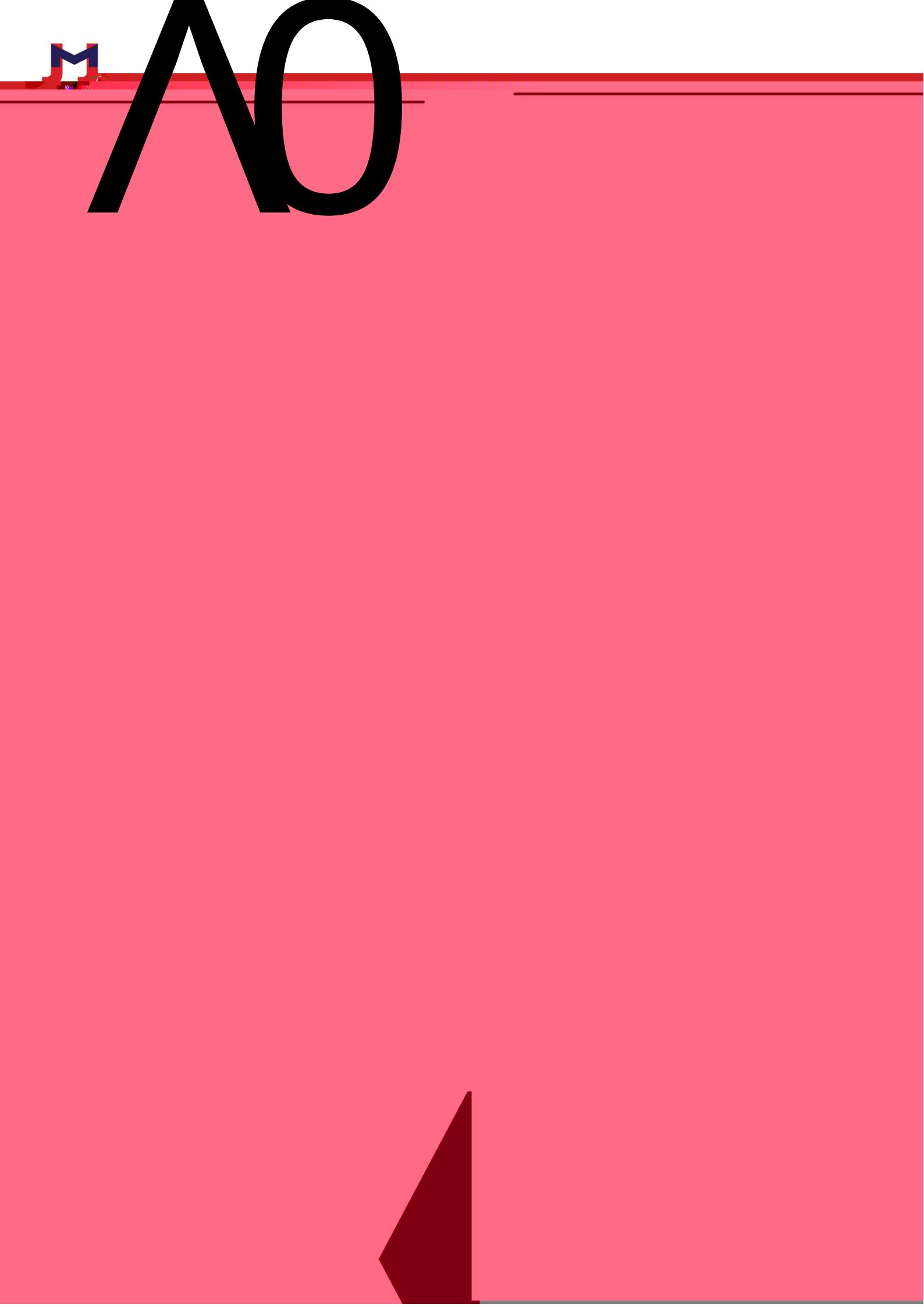
TO-247

- Trench and field-stop technology
- High speed switching
- Low collector to emitter saturation voltage
- Easy parallel switching capability
- High ruggedness performance
- RoHS compliant



- Welding machines
- UPS
- Solar inverters

Type	Marking	Package	Packaging Method
JJT40N120HK	T40120HK	TO-247	Tube





CES Collector-emitter breakdown voltage

GE



$t_{d(on)}$

Turn-on delay time

$V_{CC}=600V$

$V_{GE}=0/15V$

$I_C=40A$

$R_G=10$

Inductance

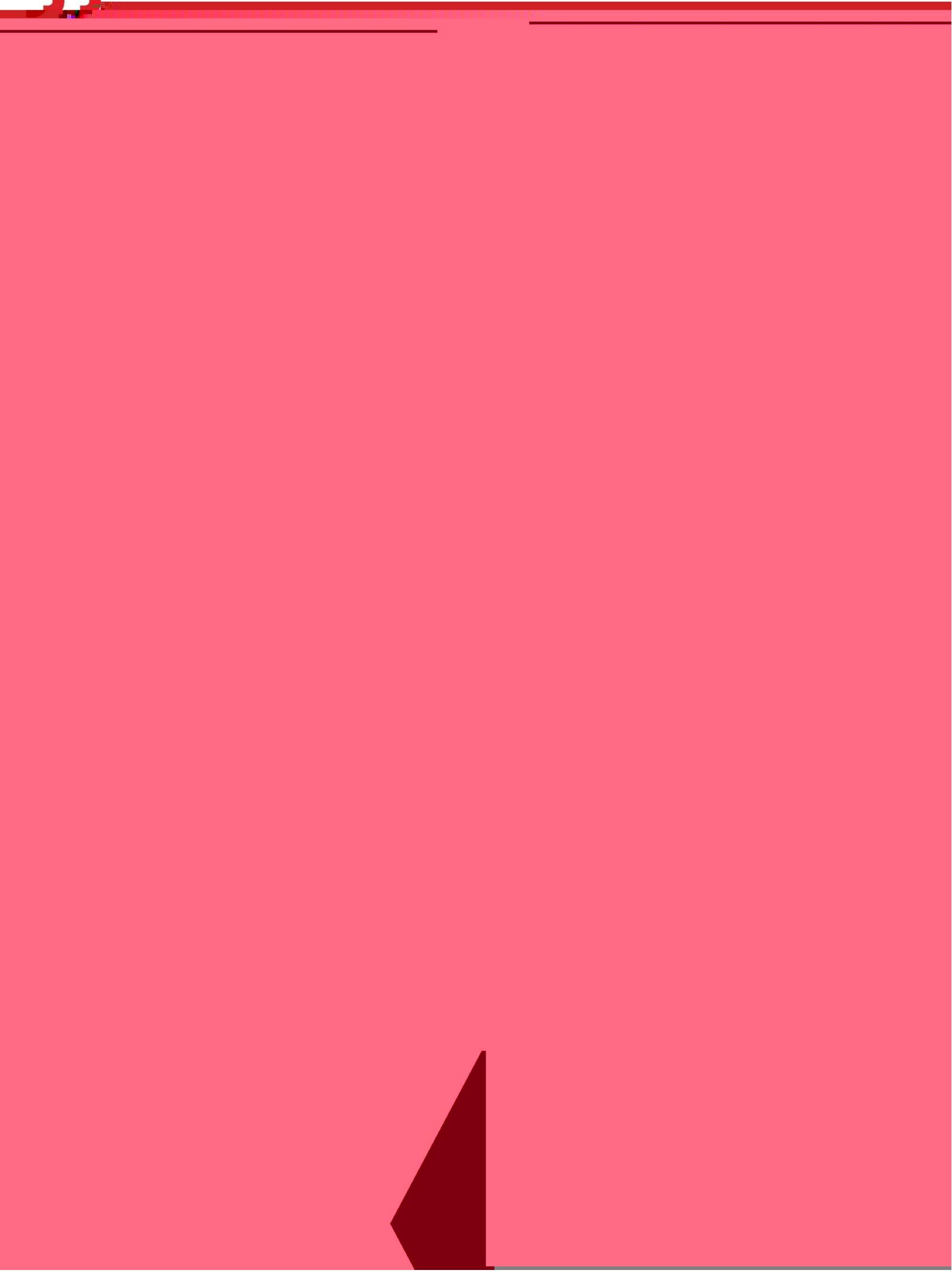
M

M H



($v_j=25$ unless otherwise specified)

F	Diode forward voltage	$F=40A$	-	2.0	-	V
		$F=40A$ $v_j=175$	-	1.6	-	V
t_r	Diode reverse recovery time	$R=600V$ $F=40A$ $d F/d = -750A/\mu s$	-	175	-	ns
i_{rrm}	Diode peak reverse recovery current		-	24	-	A
q_{rr}	Diode reverse recovery charge		-	2000	-	nC
t_r	Diode reverse recovery time	$R=600V$ $F=40A$ $d F/d = -750A/\mu s$ $v_j=175$	-	285	-	ns
i_{rrm}	Diode peak reverse recovery current		-	37	-	A
q_{rr}	Diode reverse recovery charge		-	5500	-	nC



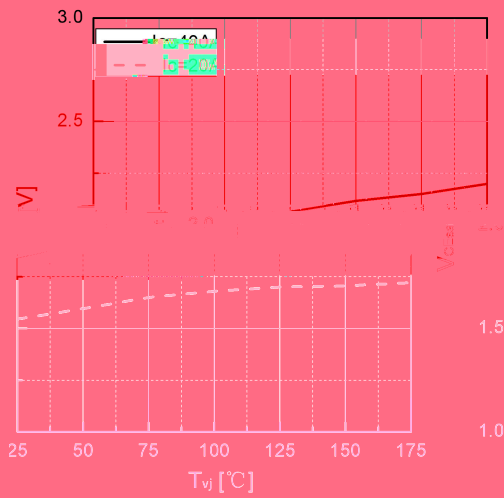


Fig 7. Typical $C_{E_{sat}}$ as a function of T_{vj}

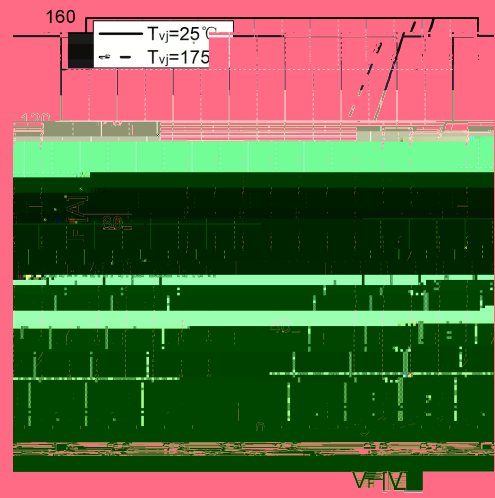


Fig 8. Typical F as a function of F

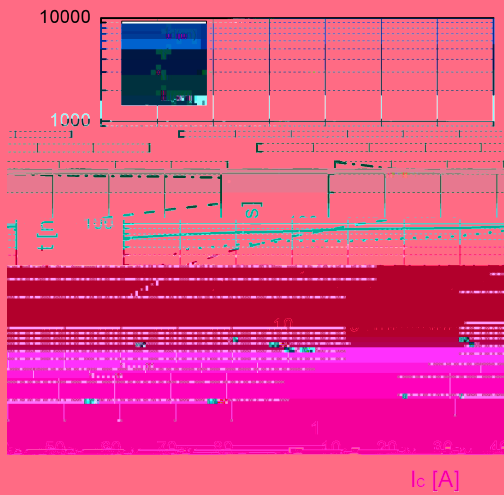


Fig 9. Typical switching time as a function of I_c

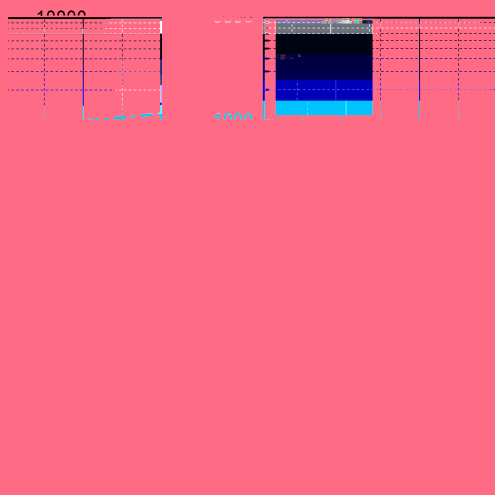


Fig 10. Typical switching times as a function of I_g

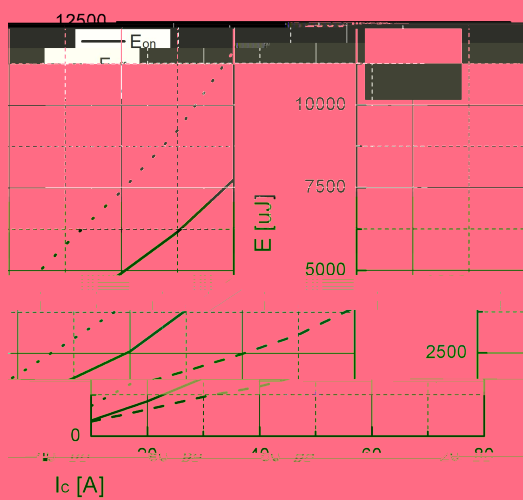


Fig 11. Typical switching energy losses as a function of I_c

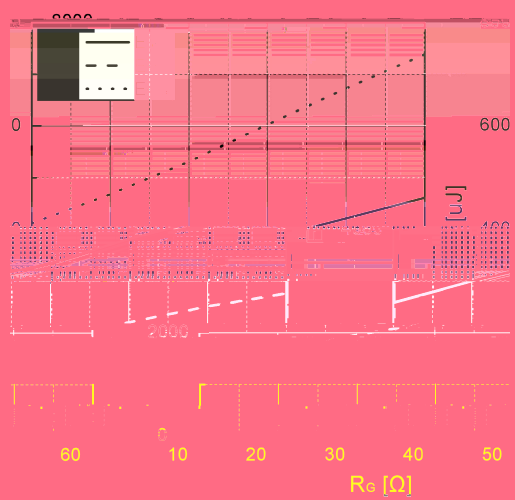


Fig 12. Typical switching energy losses as a function of R_g

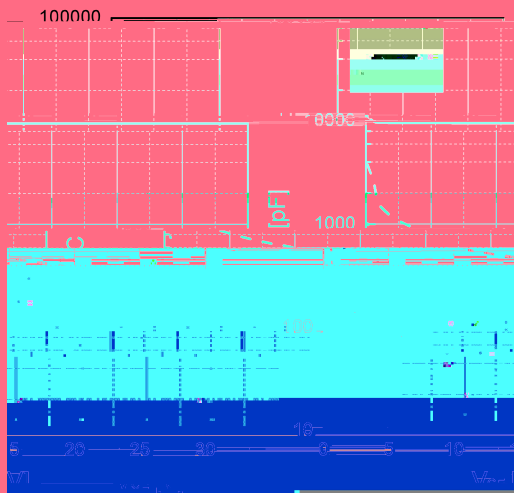


Fig 13. Typical capacitance as a function of V_{GS}
($f=1\text{MHz}$, $V_{GE}=0\text{V}$)

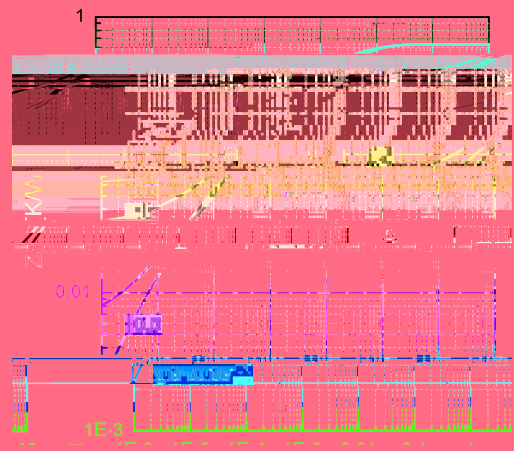
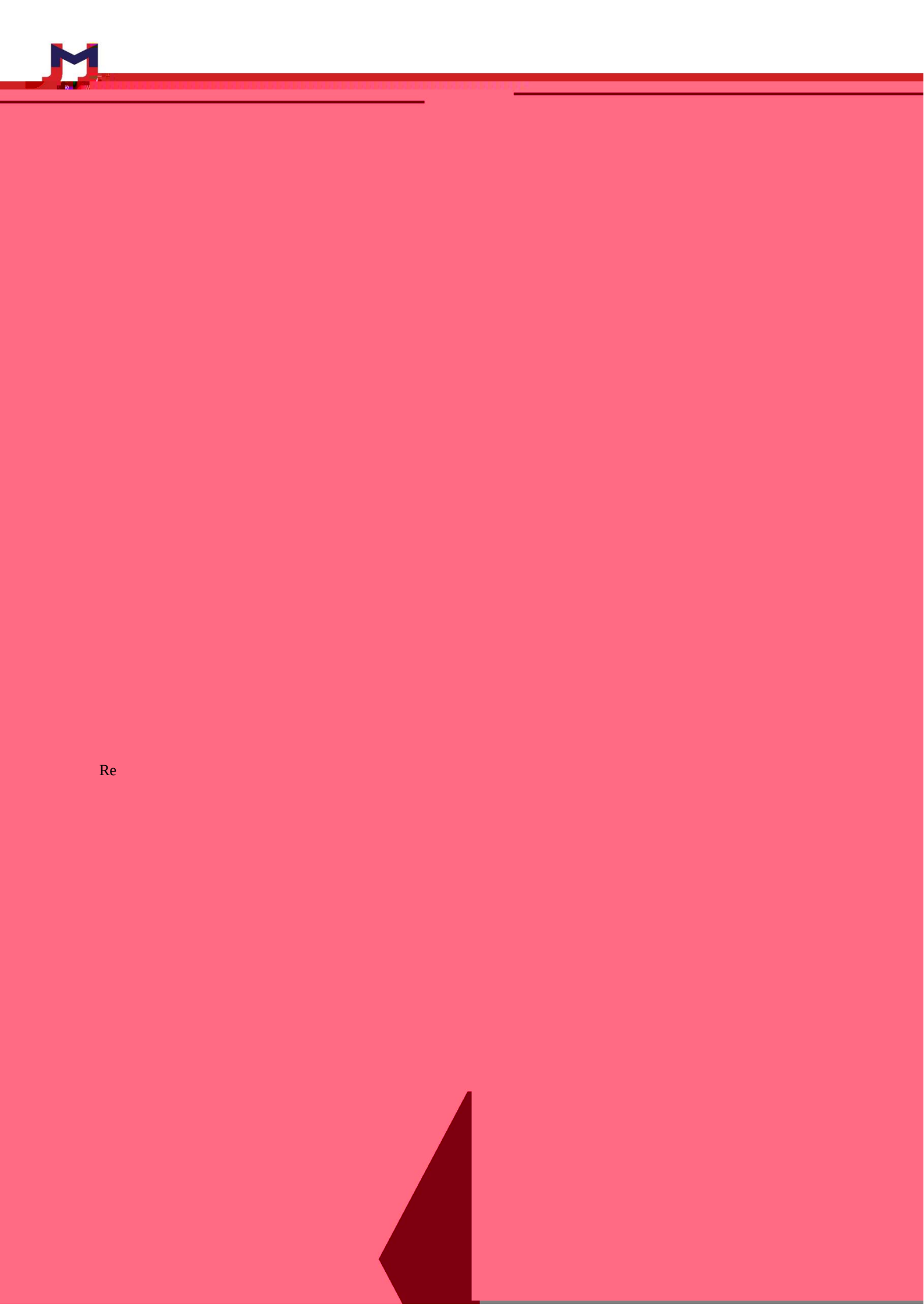
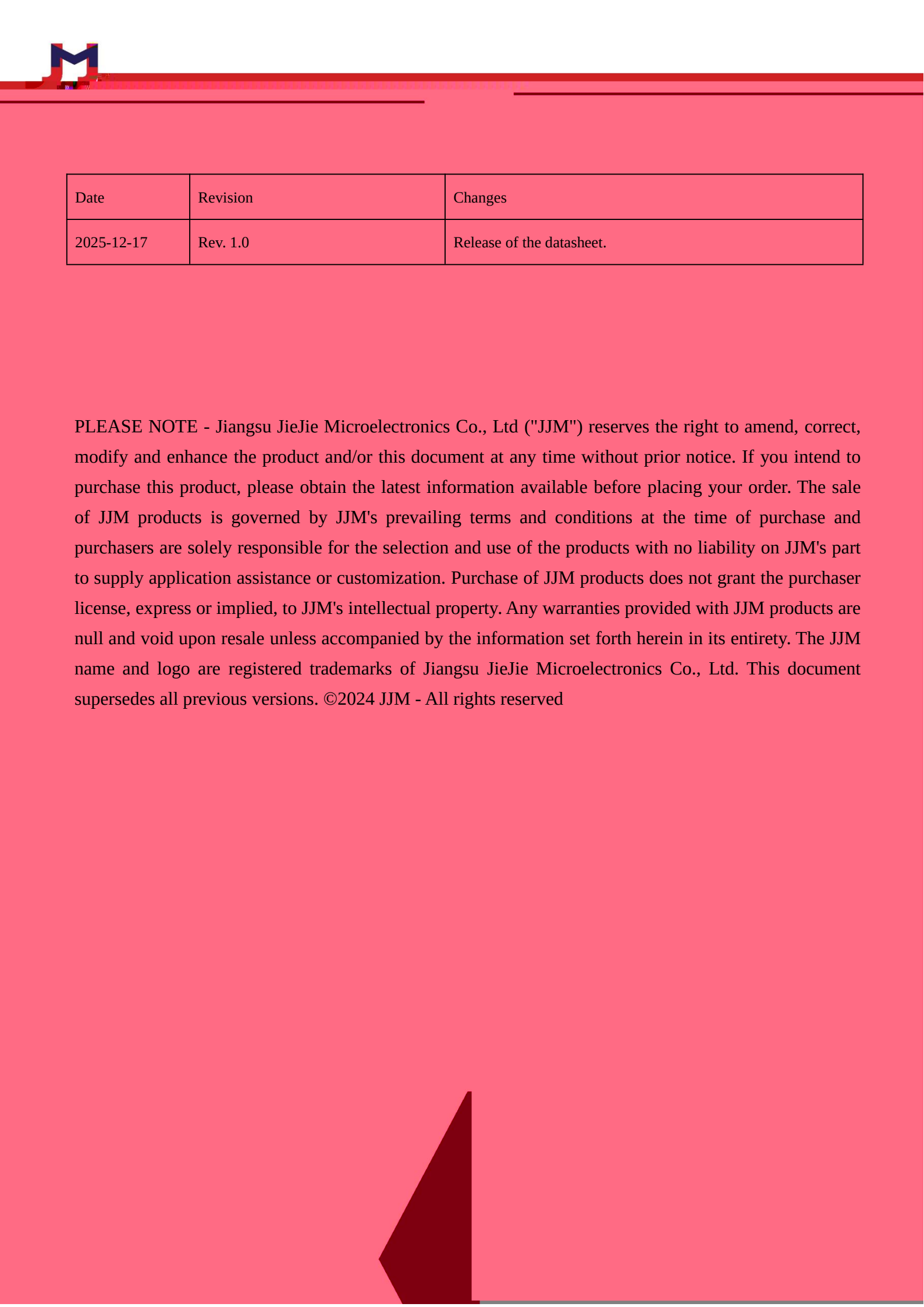


Fig 14. Transient thermal impedance of IGBT



Re



Date	Revision	Changes
2025-12-17	Rev. 1.0	Release of the datasheet.

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