



AFGH4L60T120RW-STD

THERMAL CHARACTERISTICS

Parameter	Symbol	Value	Unit
Thermal Resistance, Junction to Case for IGBT	$R_{\theta JC}$	0.26	C/W
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	40	

ELECTRICAL CHARACTERISTICS ($T_J = 25\text{ C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
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OFF CHARACTERISTICS

Collector to Emitter Breakdown Voltage	BV_{CES}	$V_{GE} = 0\text{ V}, I_C = 1\text{ mA}$	1200	ï	ï	V
Collector to Emitter Cut Off Current	I_{CES}	$V_{GE} = 0\text{ V}, V_{CE} = V_{CES}$	ï	ï	40	μA
Gate to Emitter Leakage Current	I_{GES}					

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ELECTRICAL CHARACTERISTICS (T_J = 25 C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
SWITCHING CHARACTERISTICS, INDUCTIVE LOAD (Note: Si Diode Applied)						
Turn iOn Delay Time	t _{d(on)}	V _{CE} = 600 V, V _{GE} = 15 V, I _C = 30 A, R _G = 6 Ω, T _J = 175 C	ī	59	ī	ns
Rise Time	t _r		ī	34	ī	
Turn iOff Delay Time	t _{d(off)}		ī	347	ī	
Fall Time	t _f		ī	349	ī	
Turn iOn Switching Loss	E _{on}		ī	2.68	ī	mJ
Turn iOff Switching Loss	E _{off}		ī	3.03	ī	
Total Switching Loss	E _{ts}		ī	5.7	ī	
Turn iOn Delay Time	t _{d(on)}	V _{CE} = 600 V, V _{GE} = 15 V, I _C = 60 A, R _G = 6 Ω, T _J = 175 C	ī	67	ī	ns
Rise Time	t _r		ī	52	ī	
Turn iOff Delay Time	t _{d(off)}		ī	313	ī	
Fall Time	t _f		ī	355	ī	
Turn iOn Switching Loss	E _{on}		ī	5.61	ī	mJ
Turn iOff Switching Loss	E _{off}		ī	5.67	ī	
Total Switching Loss	E _{ts}		ī	11.28	ī	

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TYPICAL CHARACTERISTICS

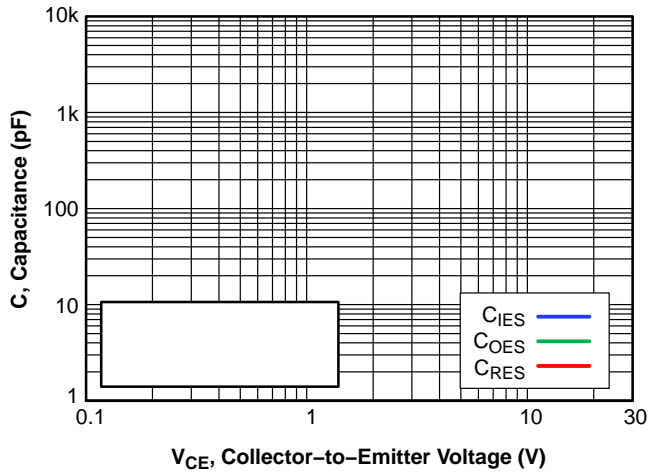


Figure 7. Capacitance Characteristics

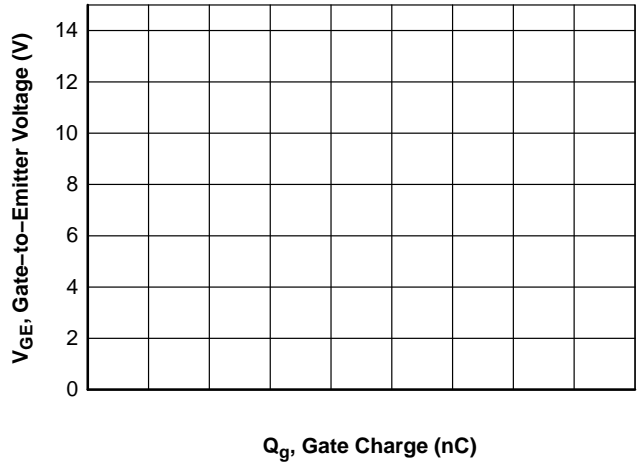


Figure 8. Gate Charge Characteristics

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TYPICAL CHARACTERISTICS

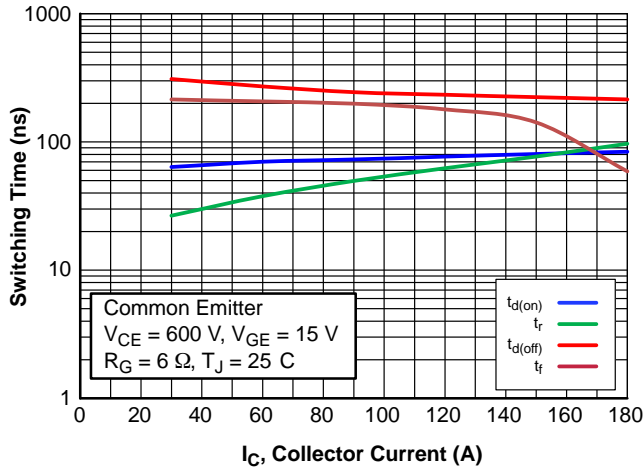


Figure 13. Switching Time vs. Collector Current

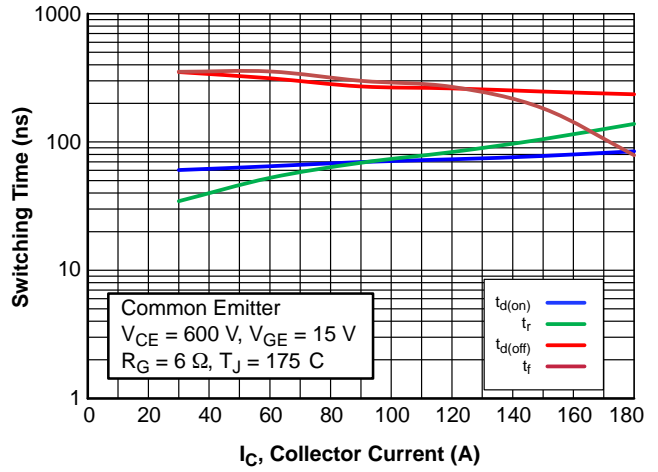


Figure 14. Switching Time vs. Collector Current

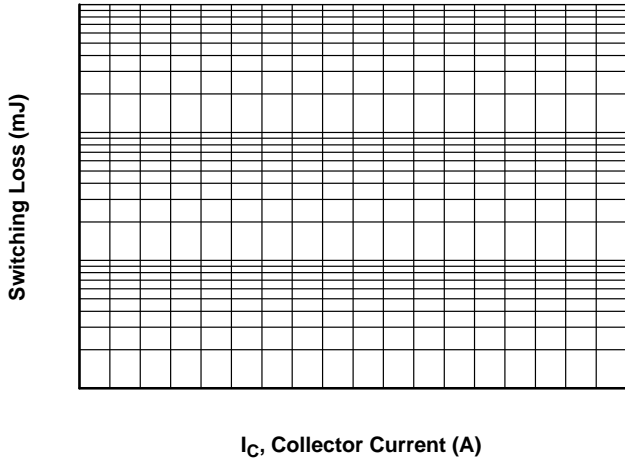


Figure 15. Switching Loss vs Collector Current

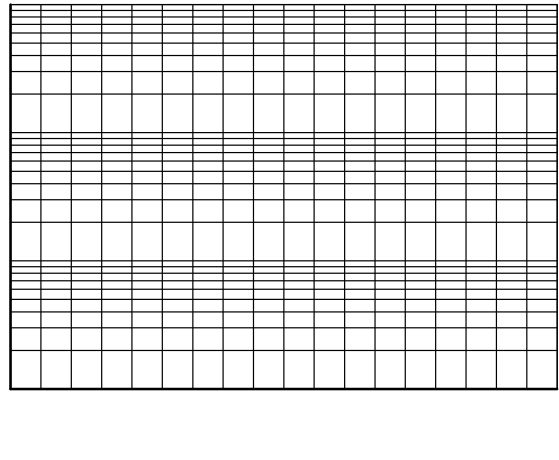


Figure 16. Switching Loss vs Collector Current

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PACKAGE DIMENSIONS

TO-247-4LD
CASE 340CJ
ISSUE A

E

E/2

D

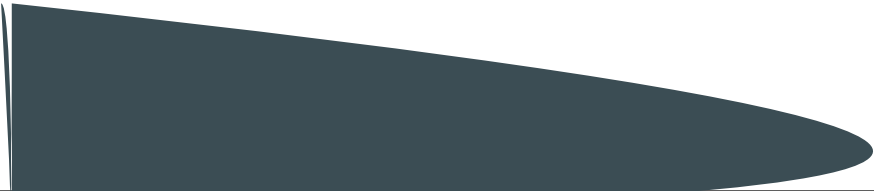
L

e1

b(4X)

e 2X

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