

**IGBT - Po e , Sing e,
 -Channe , Fie S o VII
 (FS7), SCR, Po e TO247-4L
 1200 V, 1.45 V, 40 A**

AFGH4L40T120RW

Description

Using the novel field stop 7th generation IGBT technology in TO247 4-lead package, this device offers the optimum performance with low on state voltage and minimal switching losses
 Gate-Emitter Voltage

		V _{GE}	20	
			30	
Transient Gate to Emitter Voltage				
Collector Current	T _C = 25 C	I _C	80	A
	T _C = 100 CT.8= ref2743.066 74.721 .907120.8819 0 864.4158 Tm(80)TjET274.672 243t 2= ref2743.3.1244 310.50 0 133.85			

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THERMAL CHARACTERISTICS

Parameter	Symbol	Value	Unit
Thermal Resistance, Junction to Case for IGBT	$R_{\theta JC}$	0.26	

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
SWITCHING CHARACTERISTICS, INDUCTIVE LOAD (Note: Si Diode Applied)						
Turn On Delay Time	$t_{d(on)}$	$V_{CE} = 600\text{ V}$ $V_{GE} = 0/15\text{ V}$ $I_C = 20\text{ A}$ $R_G = 6\ \Omega$ $T_J = 175\text{ C}$		58.7		ns
Turn Off Delay Time	$t_{d(off)}$			433		
Rise Time	t_r			39.4		
Fall Time	t_f			376		
Turn On Switching Loss	E_{on}			2.01		mJ
Turn Off Switching Loss	E_{off}			2.52		
Total Switching Loss	E_{ts}			4.53		
Turn On Delay Time	$t_{d(on)}$	$V_{CE} = 600\text{ V}$ $V_{GE} = 0/15\text{ V}$ $I_C = 40\text{ A}$ $R_G = 6\ \Omega$ $T_J = 175\text{ C}$		65.7		ns
Turn Off Delay Time	$t_{d(off)}$			343		
Rise Time	t_r			64.7		

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TYPICAL CHARACTERISTICS

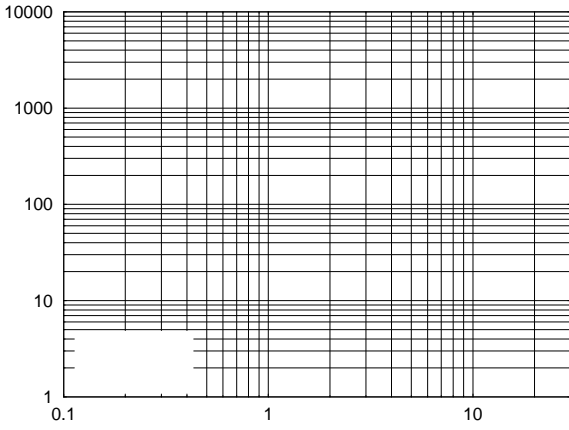


Figure 7. Capacitance Characteristics

Figure 8. Gate Charge Characteristics

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TYPICAL CHARACTERISTICS

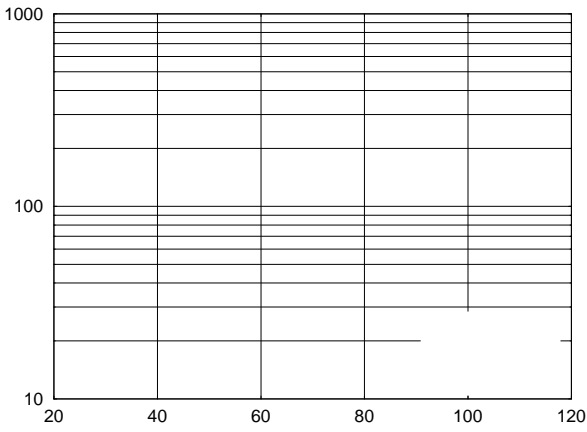


Figure 13. Switching Time vs Collector Current

Figure 14. Switching Time vs Collector Current

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