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 to Emitter Voltage

		V_{GE}	20	
Transient Gate to Emitter Voltage			30	
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.x3.1244 310.50 0 133.858			

THERMAL CHARACTERISTICS

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

ELECTRICAL CHARACTERISTICS (T_J = 25 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 V V_{GE} = 0/15 V I_C = 20 A R_G = 6 Ω T_J = 175 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 V V_{GE} = 0/15 V I_C = 40 A R_G = 6 Ω T_J = 175 C		65.7		ns
Turn Off Delay Time	$t_{d(off)}$			343		
Rise Time	t_r			64.7		

TYPICAL CHARACTERISTICS

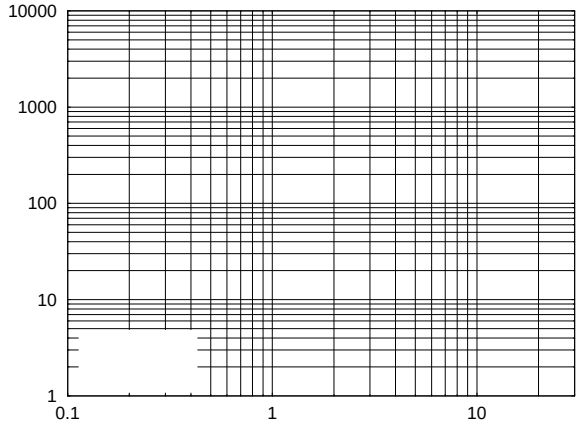

Figure 7. Capacitance Characteristics

Figure 8. Gate Charge Characteristics

TYPICAL CHARACTERISTICS

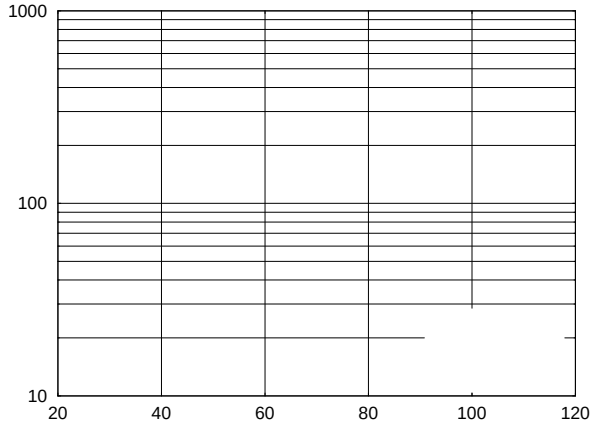

Figure 13. Switching Time vs Collector Current

Figure 14. Switching Time vs Collector Current

TO−247−4LD
CASE 340CJ
ISSUE A

DATE 16 SEP 2019