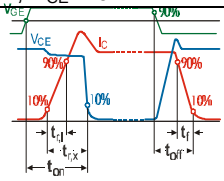


Note: *:Recommendable Value; 2.5 ~ 3.5 Nm (M5)

■ Electrical Characteristics($T_j=25^{\circ}\text{C}$)

	Items	Symbols	Test Conditions	Min.	Typ.	Max.	Units
Inverter IGBT	Zero Gate Voltage Collector Current	I_{CES}	$V_{GE}=0\text{V}$ $V_{CE}=600\text{V}$			1.0	mA
	Gate-Emitter Leakage Current	I_{GES}	$V_{CE}=0\text{V}$ $V_{GE}=\pm 20\text{V}$			200	nA
	Gate-Emitter Threshold Voltage	$V_{GE(th)}$	$V_{GE}=20\text{V}$ $I_C=30\text{mA}$	5.5	7.8	8.5	
	Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$V_{GE}=15\text{V}$ Chip		1.8		V
			$I_C = 30\text{A}$ Terminal		1.95	2.40	
	Input Capacitance	C_{ies}	$f=1\text{MHz}$, $V_{GE}=0\text{V}$, $V_{CE}=10\text{V}$		3000		pF
	Turn-on Time	t_{on}	$V_{CC} = 300\text{V}$ $I_C = 30\text{A}$ $V_{GE} = \pm 15\text{V}$ $R_G = 82\Omega$ Inductive Load 		0.45	1.2	μs
		$t_{r,x}$			0.25	0.6	
		$t_{r,i}$			0.08		
	Turn-off Time	t_{off}			0.40	1.0	
		t_f			0.05	0.35	
FRD	Diode Forward On-Voltage	V_F	$I_F=30\text{A}$ Chip		1.8		V
			Terminal		1.95	2.6	
	Reverse Recovery Time	t_{rr}	$I_F=30\text{A}$			300	ns
Rectifier	Forward Voltage	V_{FM}	$I_F=30\text{A}$ Chip		1.1		V
			Terminal		1.2	1.5	
	Reverse Current	I_{RRM}	$V_R=800\text{V}$			1.0	mA
Brake Chopper	Zero Gate Voltage Collector Current	I_{CES}	$V_{GE}=0\text{V}$ $V_{CE}=600\text{V}$			1.0	mA
	Gate-Emitter Leakage Current	I_{GES}	$V_{CE}=0\text{V}$ $V_{GE}=\pm 20\text{V}$			200	nA
	Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$V_{GE}=15\text{V}$ Chip		1.80		
			$I_C=20\text{A}$ Terminal		1.95	2.4	
	Turn-on Time	t_{on}	$V_{CC} = 300\text{V}$ $I_C = 20\text{A}$ $V_{GE} = \pm 15\text{V}$ $R_G = 120\Omega$		0.45	1.2	
		$t_{r,x}$			0.25	0.6	
	Turn-off Time	t_{off}			0.40	1.0	
		t_f			0.05	0.35	
	Reverse Current	I_{RRM}	$V_R=600\text{V}$			1.0	mA
NTC	Resistance	R	$T= 25^{\circ}\text{C}$		5000		Ω
			$T=100^{\circ}\text{C}$	465	495	520	
	B Value	B	$T=25 / 50^{\circ}\text{C}$	3305	3375	3450	K

■ Thermal Characteristics

Items	Symbols	Test Conditions	Min.	Typ.	Max.	Units
Thermal Resistance (1 device)	$R_{th(j-c)}$	Inverter IGBT			1.04	$^{\circ}\text{C/W}$
		Inverter FRD			2.00	
		Brake IGBT			1.56	
		Rectifier Diode			1.33	
Contact Thermal Resistance	$R_{th(c-f)}$	With Thermal Compound		0.05		

