

Bak Chopper T7

Symbol	Conditions	Mmm Rating	
V_{CES}	$T_{VJ} = 25^{\circ}\text{C}$ to 150°C	600	V
V_{ES}	Continuous	20	V
V_{EM}	Transient	30	V
I_{C3}	$T_C = 25^{\circ}\text{C}$	35	A
I_{C8}	$T_C = 80^{\circ}\text{C}$	25	A
RBO	$V_{GE} = 15\text{ V}$; $R_G = 47\ \Omega$; $T_{VJ} = 125^{\circ}\text{C}$ Clamped inductive load; $L = 100\ \mu\text{H}$	$I_{CM} = 40$ V_{CEK} V_{CES}	A
t_{SC} SCSD	$V_{CE} = V_{CES}$; $V_{GE} = 15\text{ V}$; $R_G = 47\ \Omega$; $T_{VJ} = 125^{\circ}\text{C}$ non-repetitive	10	μs
P_{tot}	$T_C = 25^{\circ}\text{C}$	125	W

Symbol	Conditions	Characteristic Mes		
		$(T_{VJ} = 25\text{ C, unless otherwise specified})$		
		min.	typ.	max
V_{CEsat}	$I_C = 25\text{ A}$; $V_{GE} = 15\text{ V}$; $T_{VJ} = 25^{\circ}\text{C}$ $T_{VJ} = 125^{\circ}\text{C}$		2.1 2.4	2.6 V V
$V_{E(th)}$	$I_C = 0.5\text{ mA}$; $V_{GE} = V_{CE}$	4.5		6.5 V
I_{CES}	$V_{CE} = V_{CES}$; $V_{GE} = 0\text{ V}$; $T_{VJ} = 25^{\circ}\text{C}$ $T_{VJ} = 125^{\circ}\text{C}$		0.3	0.5 mA mA
I_{ES}	$V_{CE} = 0\text{ V}$; $V_{GE} = 20\text{ V}$			200 nA
t_{don} t_r $t_{d(off)}$ t_f E_{on} E_{off}	Inductive load, $T_{VJ} = 125^{\circ}\text{C}$ $V_{CE} = 300\text{ V}$; $I_C = 25\text{ A}$ $V_{GE} = \pm 15\text{ V}$; $R_G = 47\ \Omega$		50 60 300 30 1.15 0.85	ns ns ns ns mJ mJ
C_{ies}		$V_{CE} = 25\text{ V}$; $V_{GE} = 0\text{ V}$; $f = 1\text{ MHz}$	1100	pF
Q_{gh}		$V_{CE} = 300\text{ V}$; $V_{GE} = 15\text{ V}$; $I_C = 25\text{ A}$	65	nC
R_{thf}				1.0 K/W

Bak Chopper D7

Symbol	Conditions	Mmm Rating	
V_{RRM}	$T_{VJ} = 25^{\circ}\text{C}$ to 150°C	600	V
I_{F3}	$T_C = 25^{\circ}\text{C}$	22	A
I_{F8}	$T_C = 80^{\circ}\text{C}$	15	A

Symbol	Conditions	Characteristic Mes		
		min.	typ.	max
V_F	$I_F = 25\text{ A}$; $T_{VJ} = 25^{\circ}\text{C}$ $T_{VJ} = 125^{\circ}\text{C}$		1.8	2.5 V V
I_R	$V_R = V_{RRM}$; $T_{VJ} = 25^{\circ}\text{C}$ $T_{VJ} = 125^{\circ}\text{C}$		0.07	0.06 mA mA
I_{RM} t_{rr}	$I_F = 10\text{ A}$; $di_F/dt = -400\text{ A}/\mu\text{s}$; $T_{VJ} = 125^{\circ}\text{C}$ $V_R = 300\text{ V}$		11 80	A ns
R_{thf}				3.2 K/W