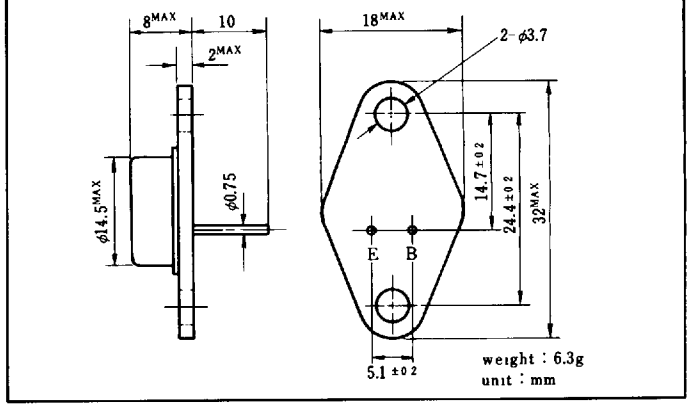
80W
T6M$_{F1}$

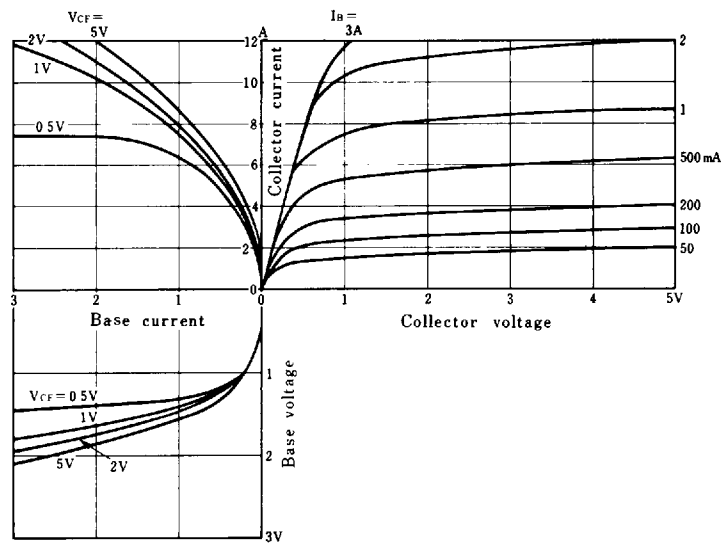
● Outline Dimensions



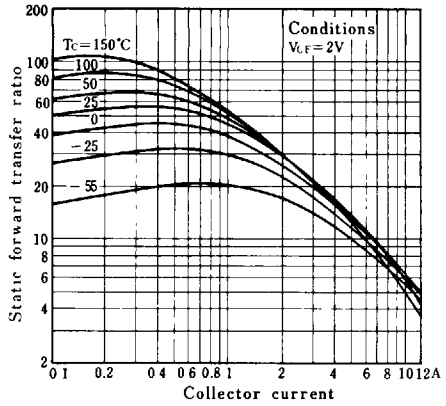
● Ratings

Item			Symbol	EIAJ.No. / House. No. / Conditions	2SC2506 / T6M40F1	Unit
Absolute Maximum Ratings	Storage Temperature		Tstg		−55～+150	℃
	Junction Temperature		T_j		+150	℃
	Collector to Base Voltage		V_{CBO}		500	V
	Collector to Emitter Voltage		V_{CEO}		400	V
	Emitter to Base Voltage		V_{EBO}		7	V
	Collector Current	DC	I_C		6	A
		Peak	I_{CP}		12	A
	Base Current	DC	I_B		2	A
		Peak	I_{BP}		4	A
	Transistor Dissipation		P_T	T_C=25℃	80	W
Electrical Characteristics (T_C=25℃)	Collector to Emitter Sustaining Voltage		$V_{CEO(sus)}$	I_C=0.2A	MIN 400	V
	Collector Cut-off Current		I_{CBO}	At Rated Voltage	MAX 0.1	mA
			I_{CEO}	At Rated Voltage ×0.8	MAX 0.1	mA
	Emitter Cut-off Current		I_{EBO}	At Rated Voltage	MAX 1	mA
	Static Forward Transfer Ratio		h_{FE1}	V_{CE}=2V, I_C=3A	MIN 15 / STD 20	
			h_{FE2}	V_{CE}=2V, I_C=6A	MIN 8 / STD 10	
	Collector to Emitter Saturation Voltage		$V_{CE(sat)}$	I_C=3A, I_B=0.3A	STD 0.25 / MAX 0.7	V
	Base to Emitter Saturation Voltage		$V_{BE(sat)}$	I_C=3A, I_B=0.3A	STD 1 / MAX 1.5	V
	Junction to Case Thermal Resistance		θ_{jc}	Between Junction and Case	MAX 1.56	℃/W
	Gain Bandwidth Product		f_T	V_{CE}=10V I_C=0.6A	STD 20	MHz
	Turn on Time		ton	I_{B1}=I_{B2}=0.6A, I_C=3A, R_L=10Ω, V_{BB2}=4V	STD 1 / MAX 0.55	μS
	Storage Time		ts		STD 3 / MAX 2.5	μS
	Fall Time		tf		STD 0.7 / MAX 0.5	μS

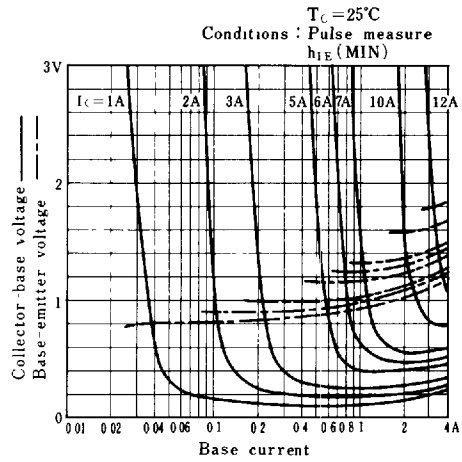
● Input Output transmission characteristics



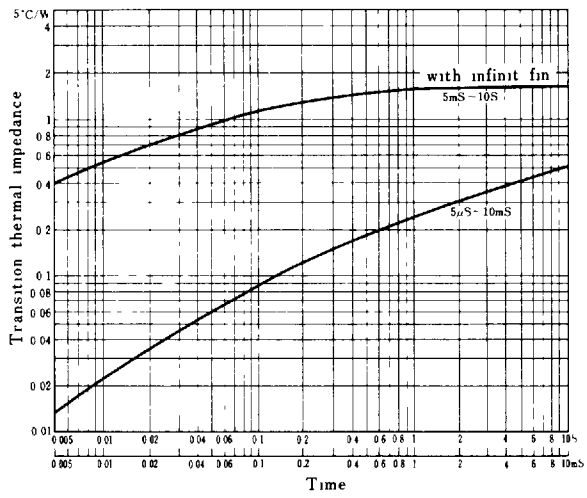
●Static forward transfer ratio vs temp. characteristics



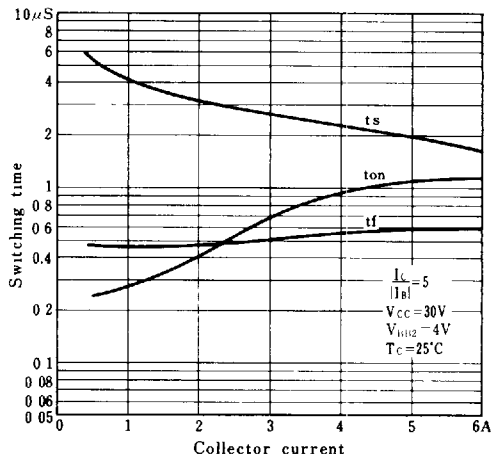
●Saturation voltage characteristics



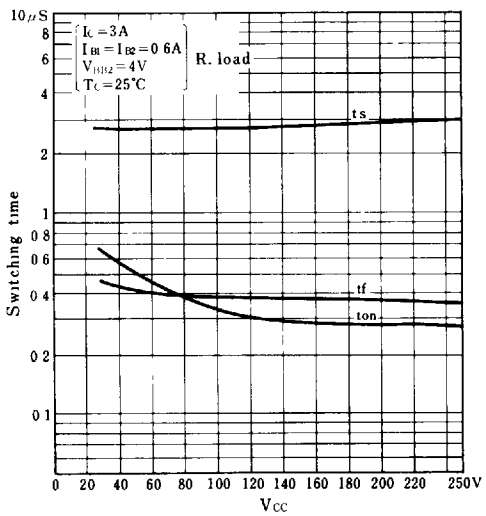
●Transition heat impedance



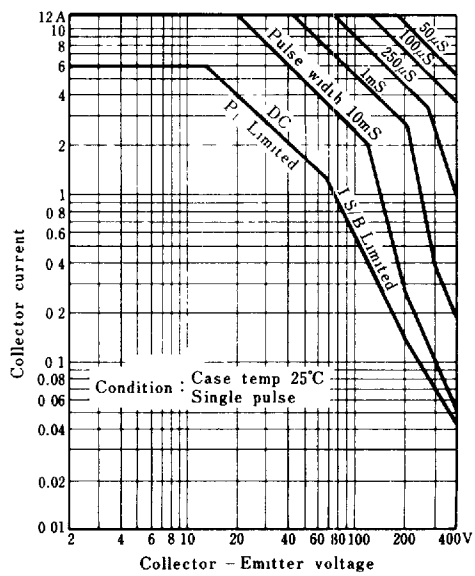
●Collector current vs Switching time



●Vcc vs Switching time



●Safe operating zone



●Dissipation and IS/B derating curve