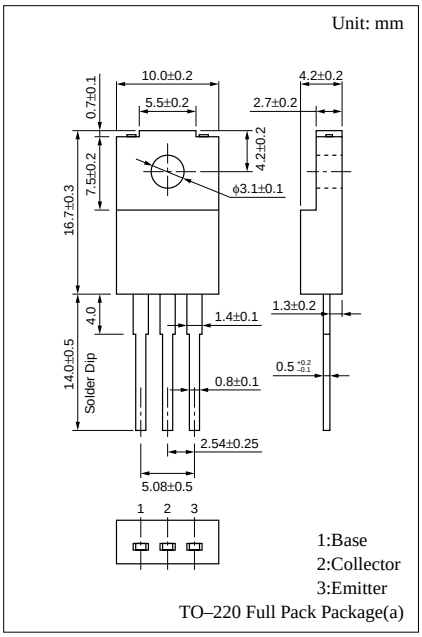
2SC3946

Silicon NPN triple diffusion planar type

For color TV horizontal deflection driver



Features

- High collector to emitter V_{CEO}
- Large collector power dissipation P_C
- Full-pack package which can be installed to the heat sink with one screw

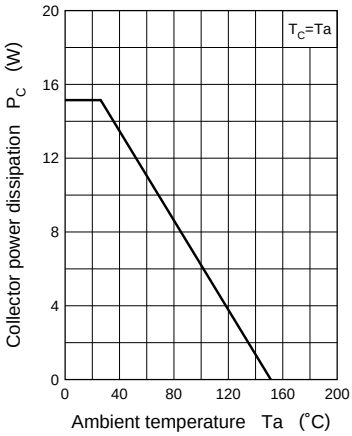
Absolute Maximum Ratings (T_C=25˚C)

Parameter		Symbol	Ratings	Unit
Collector to base voltage		V_{CBO}	350	V
Collector to emitter voltage		V_{CEO}	300	V
Emitter to base voltage		V_{EBO}	7.5	V
Peak collector current		I_{CP}	400	mA
Collector current		I_C	200	mA
Collector power dissipation	T_C=25°C	P_C	15	W
	Ta=25°C		2.0	
Junction temperature		T_j	150	˚C
Storage temperature		T_{stg}	–55 to +150	˚C

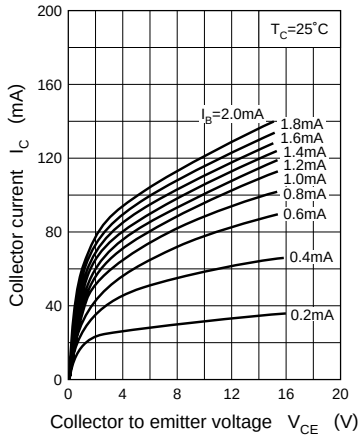
Electrical Characteristics (T_C=25˚C)

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	I_{CBO}	V_{CB} = 200V, I_E = 0			2	μA
Emitter cutoff current	I_{EBO}	V_{EB} = 5V, I_C = 0			2	μA
Collector to base voltage	V_{CBO}	I_C = 100μA, I_E = 0	350			V
Collector to emitter voltage	V_{CEO}	I_C = 5mA, I_B = 0	300			V
	V_{CER}	I_C = 100μA, I_B = 0, R_{BE} = 1kΩ	350			V
Emitter to base voltage	V_{CEO}	I_E = 100μA, I_C = 0	7.5			V
Forward current transfer ratio	h_{FE}	V_{CB} = 10V, I_C = 10mA	40		250	
Collector to emitter saturation voltage	$V_{CE(sat)}$	I_C = 50mA, I_B = 5mA			1	V
Transition frequency	f_T	V_{CE} = 30V, I_C = 10mA, f = 1MHz	50			MHz
Collector output capacitance	C_{ob}	V_{CB} = 50V, I_E = 0, f = 1MHz			5	pF

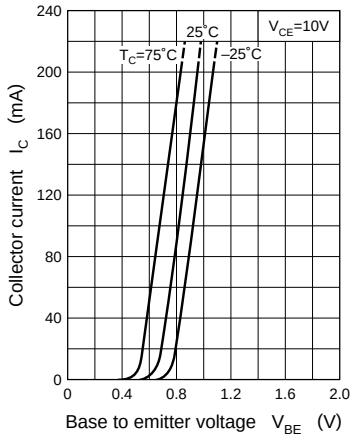
P_C — Ta



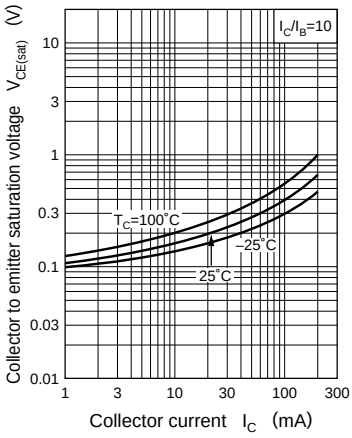
I_C — V_{CE}



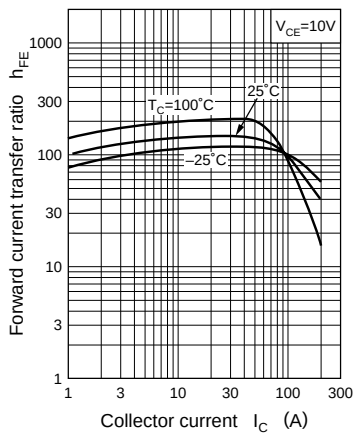
I_C — V_{BE}



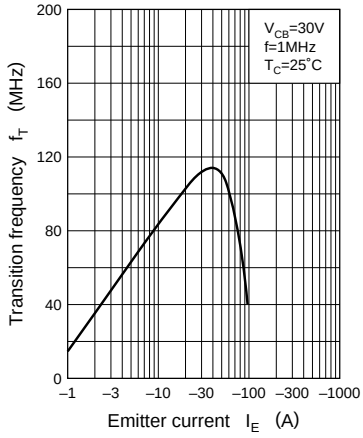
$V_{CE(sat)}$ — I_C



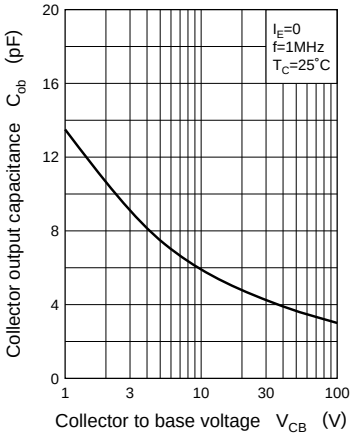
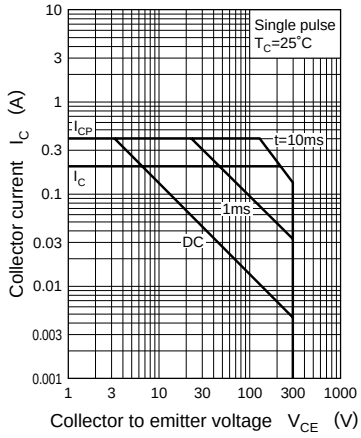
h_{FE} — I_C



f_T — I_E



C_{ob} — V_{CB}



Area of safe operation (ASO)