2SC4158 (Preliminary)

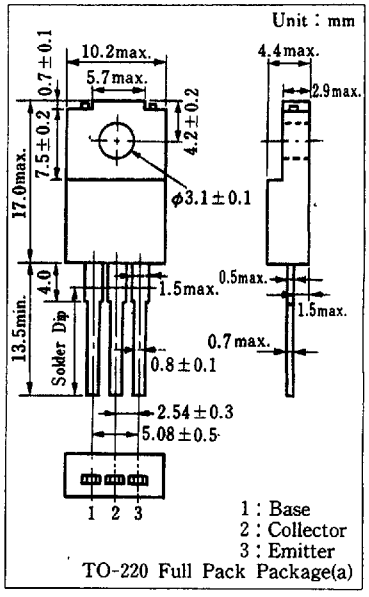
Silicon NPN Epitaxial Planar Type

TV Video Output

■ Feature

- High transition frequency (f_T)

■ Package Dimensions



■ Absolute Maximum Ratings (Tc=25°C)

Item		Symbol	Value	Unit
Collector-base voltage		V_{CBO}	250	V
Collector-emitter voltage		V_{CEO}	250	V
Emitter-base voltage		V_{EBO}	3	V
Peak collector current		I_{CP}	200	mA
Collector current		I_C	100	mA
Collector power dissipation	T_C=25℃	P_C	8	W
	Ta=25℃		2.0	
Junction temperature		T_j	150	℃
Storage temperature		T_{stg}	−55～+150	℃

■ Electrical Characteristics (Tc=25°C)

Item	Symbol	Condition	min.	typ.	max.	Unit
Emitter cutoff current	I_{EBO}	V_{EB}=2V, I_C=0			1	μA
Collector-base cutoff current	V_{CBO}	I_C=100μA, I_E=0	250			V
Collector-emitter voltage	V_{CEO}	I_C=1mA, I_B=0	250			V
Emitter-base voltage	V_{EBO}	I_E=10μA, I_C=0	3			V
DC current gain	h_{FE}	V_{CE}=10V, I_C=30mA	40		200	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=50mA, I_B=5mA			0.5	V
Transition frequency	f_T	V_{CE}=10V, I_C=10mA	250	300		MHz
Collector output capacitance	C_{ob}	V_{CB}=30V, I_E=0, f=1MHz		2.2		pF