



2SA1433 — PNP Epitaxial Planar Silicon Transistor

High-Definition CRT Display Applications

Features

- High f_T (Gain-Bandwidth Product).
- Small reverse transfer capacitance ($C_{re}=1.3pF$).
- Adoption of FBET process.

Specifications

Absolute Maximum Ratings at $T_a=25^\circ C$

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		-70	V
Collector-to-Emitter Voltage	V_{CEO}		-60	V
Emitter-to-Base Voltage	V_{EBO}		-4	V
Collector Current	I_C		-50	mA
Collector Current (Pulse)	I_{CP}		-100	mA
Collector Dissipation	P_C		900	mW
Junction Temperature	T_J		150	$^\circ C$
Storage Temperature	T_{stg}		-55 to +150	$^\circ C$

Electrical Characteristics at $T_a=25^\circ C$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	$V_{CB}=-40V, I_E=0A$			-0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=-3V, I_C=0A$			-1.0	μA
DC Current Gain	h_{FE}	$V_{CE}=-10V, I_C=-10mA$	60*		320*	
Gain-Bandwidth Product	f_T	$V_{CE}=-10V, I_C=-10mA$	350	700		MHz
Base-to-Collector Time Constant	$r_{bb} \cdot C_c$	$V_{CE}=-10V, I_C=-10mA$		8		pF
Output Capacitance	C_{ob}	$V_{CB}=-10V, f=1MHz$		1.7		pF
Reverse Transfer Capacitance	C_{re}	$V_{CB}=-10V, f=1MHz$		1.3		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-20mA, I_B=-2mA$			-0.6	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=-20mA, I_B=-2mA$			-1.0	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=-10\mu A, I_E=0A$	-70			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=-1mA, R_{BE}=\infty$	-60			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=-10\mu A, I_C=0A$	-4			V

* : The 2SA1433 is classified by 10mA h_{FE} as follows :

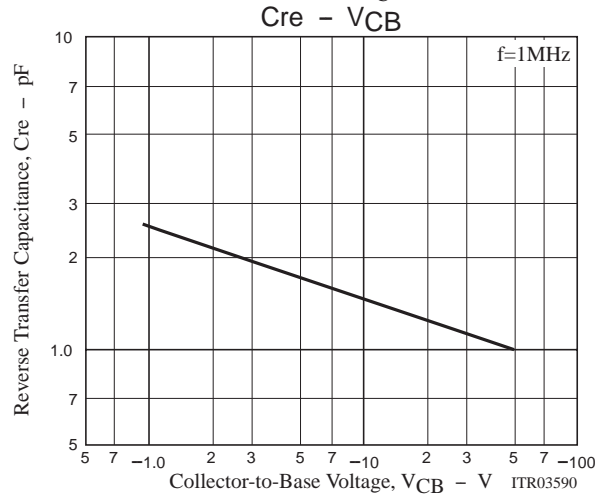
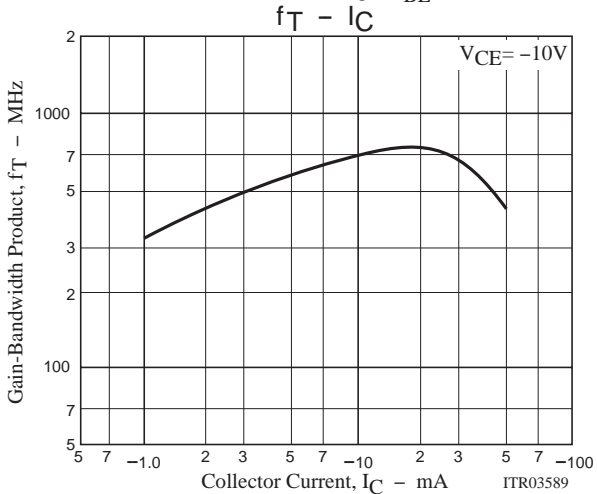
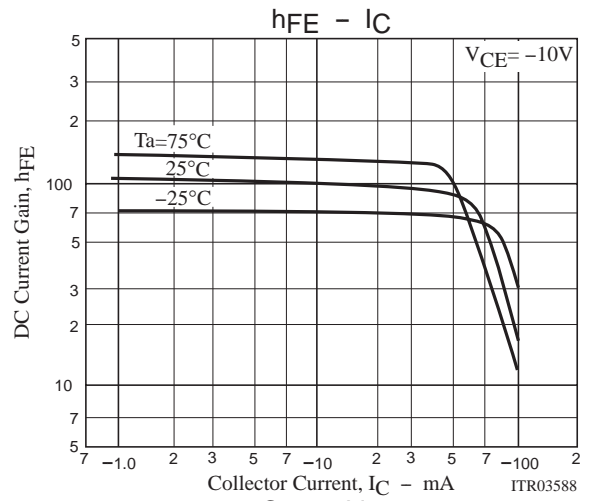
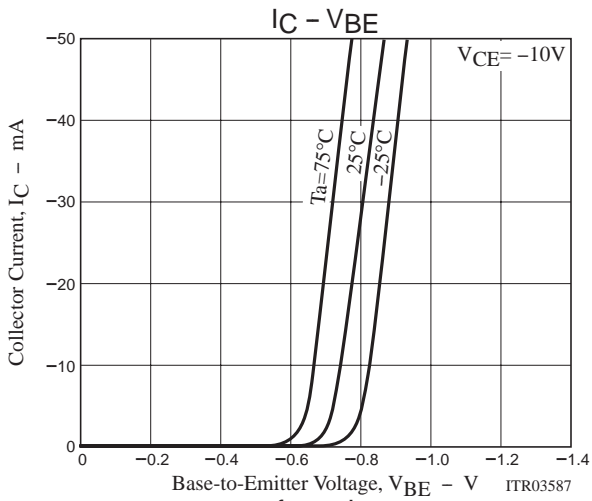
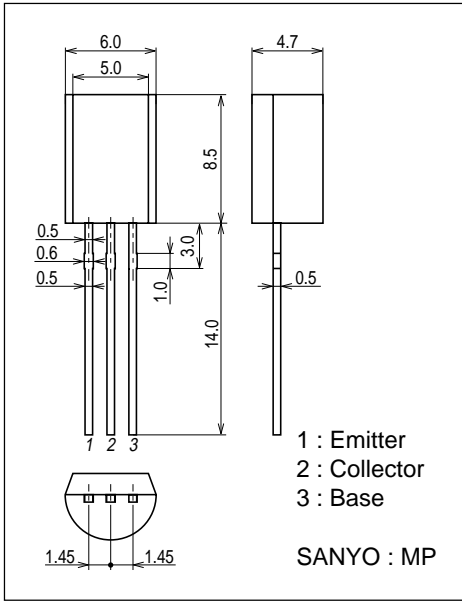
Rank	D	E	F
h_{FE}	60 to 120	100 to 200	160 to 320

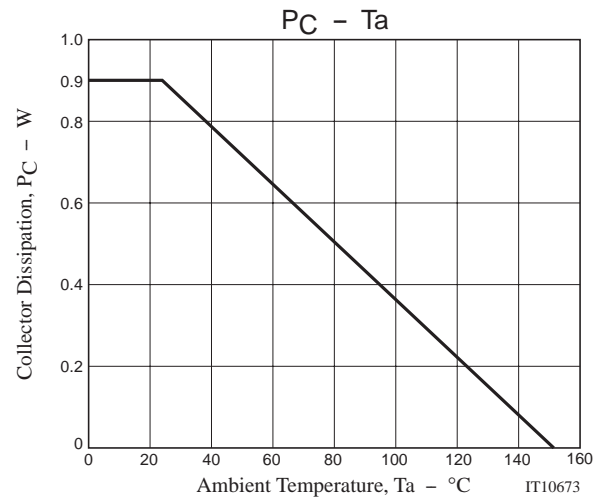
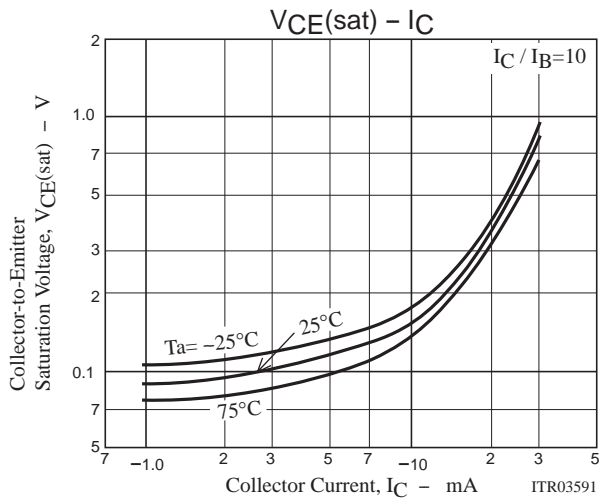
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Package Dimensions

unit : mm
7520-002





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