

<b>SANYO</b>	No.1199C	<b>2SA1289/2SC3253</b>
		PNP/NPN Epitaxial Planar Silicon Transistors
<b>60V/5A High-Speed Switching Applications</b>		

**Applications**

- Various inductance lamp drivers for electrical equipment.
- Inverters, converters (strobo, flash, fluorescent lamp lighting circuit).
- Power amp (high power car stereo, motor controller).
- High-speed switching (switching regulator, driver).

**Features**

- Low saturation voltage.
- Excellent current dependence of  $h_{FE}$ .
- Short switching time.

( ) : 2SA1289

**Absolute Maximum Ratings at  $T_a = 25^\circ\text{C}$**

			unit
Collector-to-Base Voltage	$V_{CB0}$	(-)	80 V
Collector-to-Emitter Voltage	$V_{CE0}$	(-)	60 V
Emitter-to-Base Voltage	$V_{EB0}$	(-)	5 V
Collector Current	$I_C$	(-)	5 A
Collector Current (Pulse)	$I_{CP}$	(-)	7 A
Collector Dissipation	$P_C$	$T_c = 25^\circ\text{C}$	30 W
Junction Temperature	$T_j$		150 $^\circ\text{C}$
Storage Temperature	$T_{stg}$		- 55 to + 150 $^\circ\text{C}$

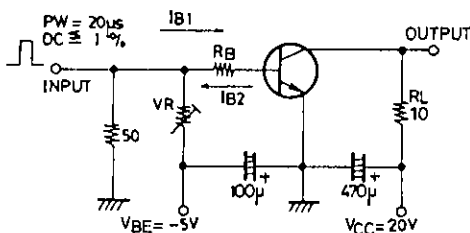
**Electrical Characteristics at  $T_a = 25^\circ\text{C}$**

			min	typ	max	unit
Collector Cutoff Current	$I_{CBO}$	$V_{CB} = (-)40\text{V}, I_E = 0$			(-)	0.1 mA
Emitter Cutoff Current	$I_{EBO}$	$V_{EB} = (-)4\text{V}, I_C = 0$			(-)	0.1 mA
DC Current Gain	$h_{FE}$	$V_{CE} = (-)2\text{V}, I_C = (-)1\text{A}$	70*		280*	
Gain-Bandwidth Product	$f_T$	$V_{CE} = (-)5\text{V}, I_C = (-)1\text{A}$		100		MHz
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = (-)2.5\text{A}, I_B = (-)0.125\text{A}$			(-)	0.4 V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = (-)1\text{mA}, I_E = 0$	(-)	80		V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = (-)1\text{mA}, R_{BE} = \infty$	(-)	60		V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E = (-)1\text{mA}, I_C = 0$	(-)	5		V
Turn-on Time	$t_{on}$	See specified Test Circuit.		0.1		$\mu\text{s}$
Storage Time	$t_{stg}$	"		0.5		$\mu\text{s}$
Fall Time	$t_f$	"		0.1		$\mu\text{s}$

\* : The 2SA1289/2SC3253 are classified by 1A  $h_{FE}$  as follows

70	Q	140	100	R	200	140	S	280
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**Switching Time Test Circuit**

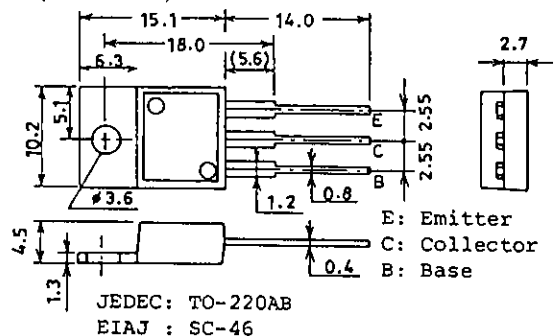


(For PNP, the polarity is reversed).

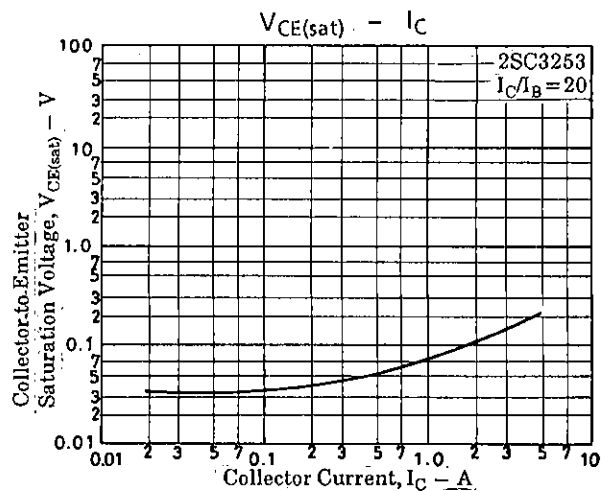
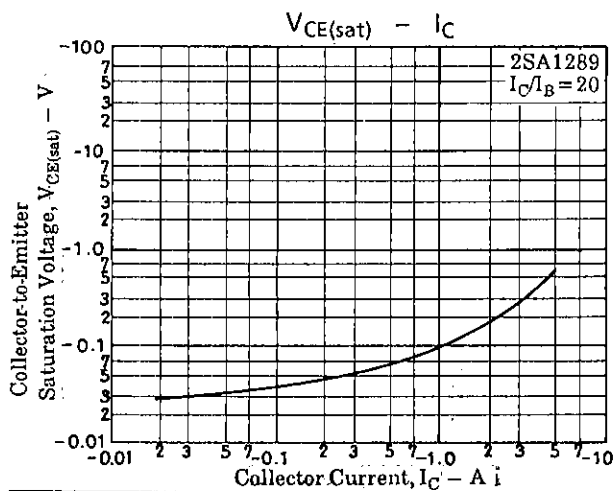
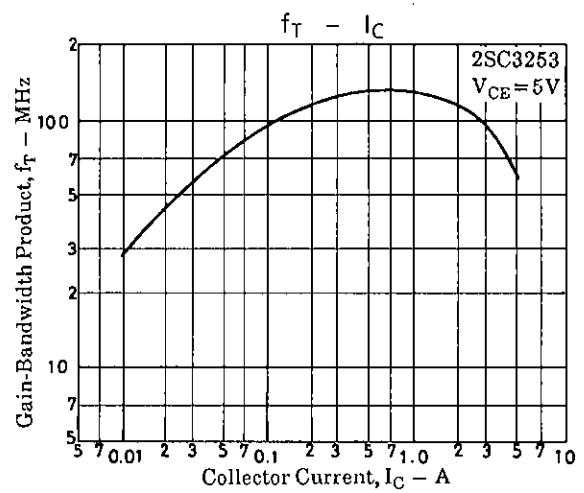
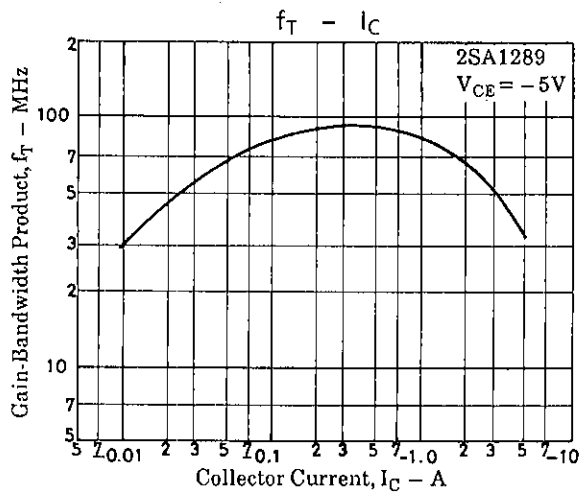
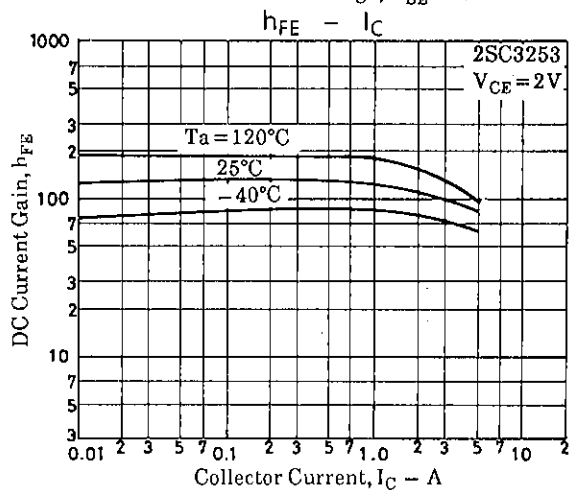
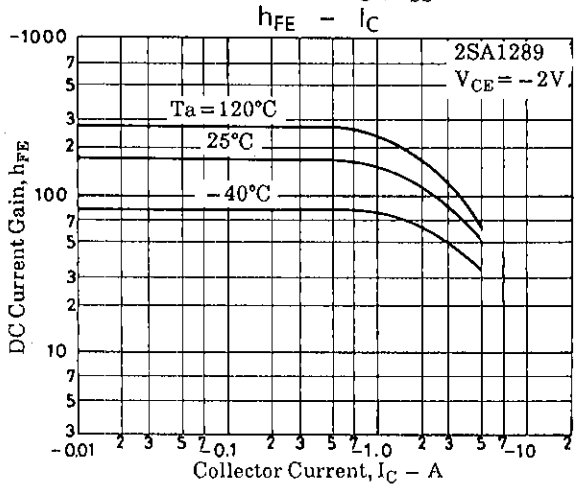
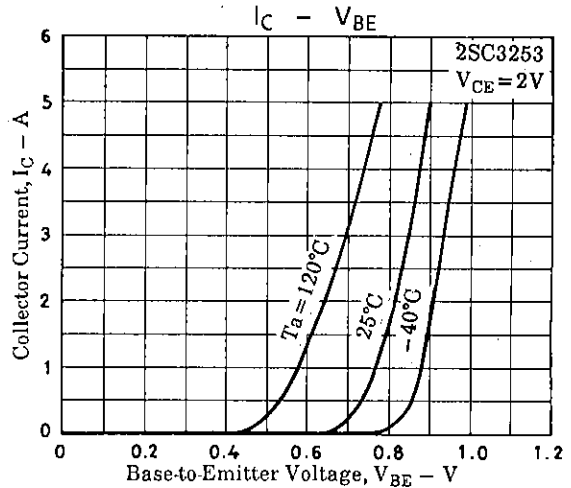
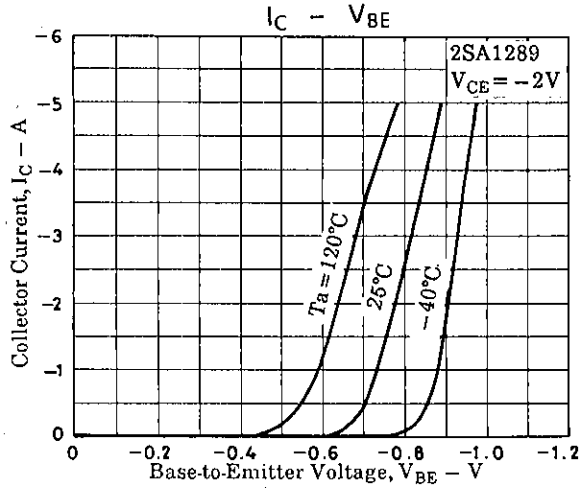
Unit (resistance:  $\Omega$ , capacitance: F)

**Package Dimensions 2010B**

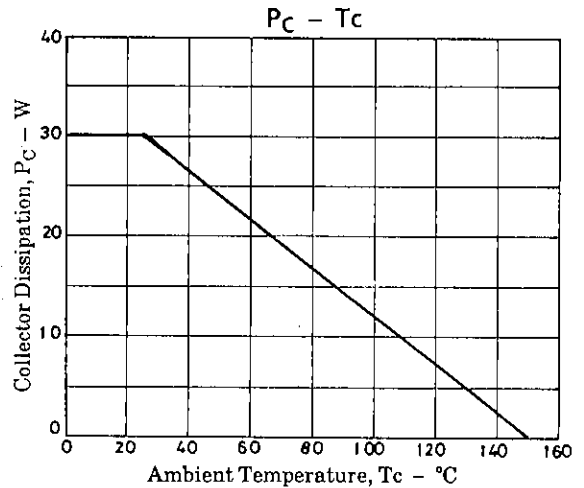
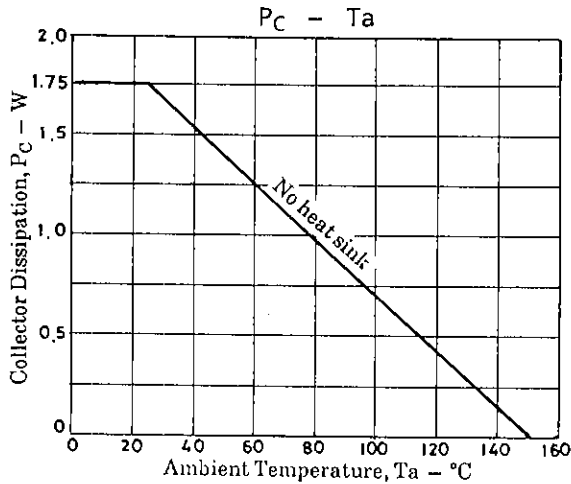
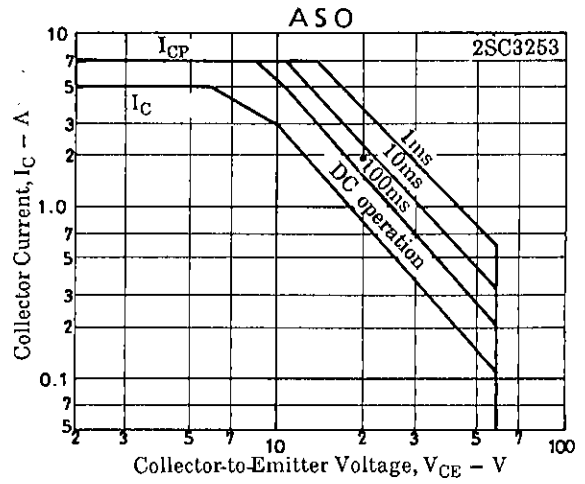
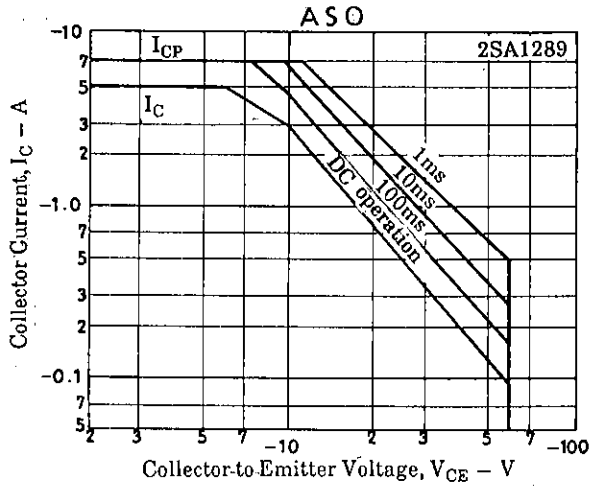
(unit : mm)



2SA1289/2SC3253



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