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PNP / NPN Epitaxial Planar Silicon Transistors

2SA1479 / 2SC3789 — High-Definition CRT Display Video Output Applications

Applications

- High-definition CRT display.
- Color TV chroma output, high breakdown voltage drivers.

Features

- High breakdown voltage : $V_{CEO} \geq 300V$.
- Excellent high frequency characteristic : $C_{re} = 1.8pF$ (typ).
- Adoption of MBIT process.
- No insulator required for mounting, which contributes to reducing the cost and the number of manufacturing processes.
- Plastic-covered heat sink facilitating high-density mounting.
- Directly interchangeable with TO-126 because the package is designed based on the conventional package dimensions.

Specifications () : 2SA1479

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

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		(-)300	V
Collector-to-Emitter Voltage	V_{CEO}		(-)300	V
Emitter-to-Base Voltage	V_{EBO}		(-)5	V
Collector Current	I_C		(-)100	mA
Collector Current (Pulse)	I_{CP}		(-)200	mA
Collector Dissipation	P_C		1.5	W
		$T_c = 25^\circ C$	7	W
Junction Temperature	T_j		150	$^\circ C$
Storage Temperature	T_{stg}		-55 to +150	$^\circ C$

2SA1479 / 2SC3789

Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	$V_{CB}=(-)200V, I_E=0A$			$(-)0.1$	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=(-)4V, I_C=0A$			$(-)0.1$	μA
DC Current Gain	h_{FE}	$V_{CE}=(-)10V, I_C=(-)10mA$	40*		320*	
Gain-Bandwidth Product	f_T	$V_{CE}=(-)30V, I_C=(-)10mA$		70		MHz
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	$V_{(BR)CBO}$	$I_C=(-)10\mu A, I_E=0A$	$(-)300$			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=(-)1mA, R_{BE}=\infty$	$(-)300$			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=(-)10\mu A, I_C=0A$	$(-)5$			V
Output Capacitance	C_{ob}	$V_{CB}=(-)30V, f=1MHz$		(3.1)2.6		pF
Reverse Transfer Capacitance	C_{re}	$V_{CB}=(-)30V, f=1MHz$		(2.3)1.8		pF

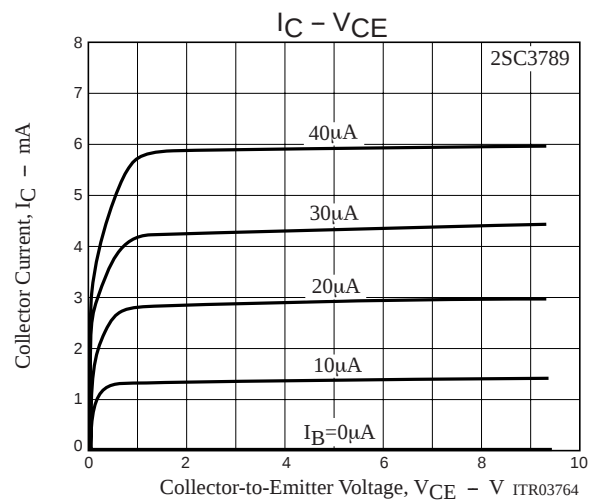
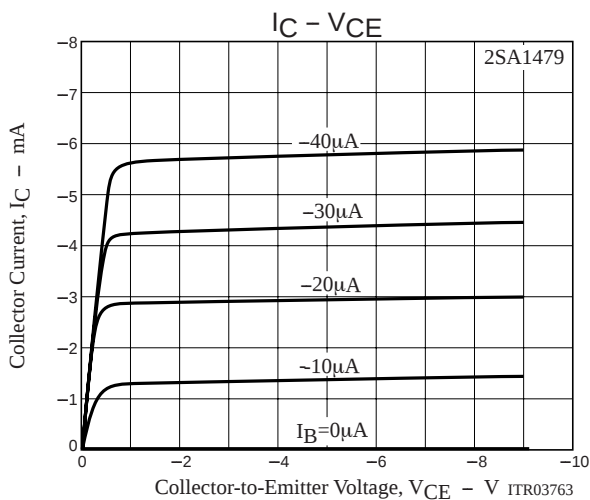
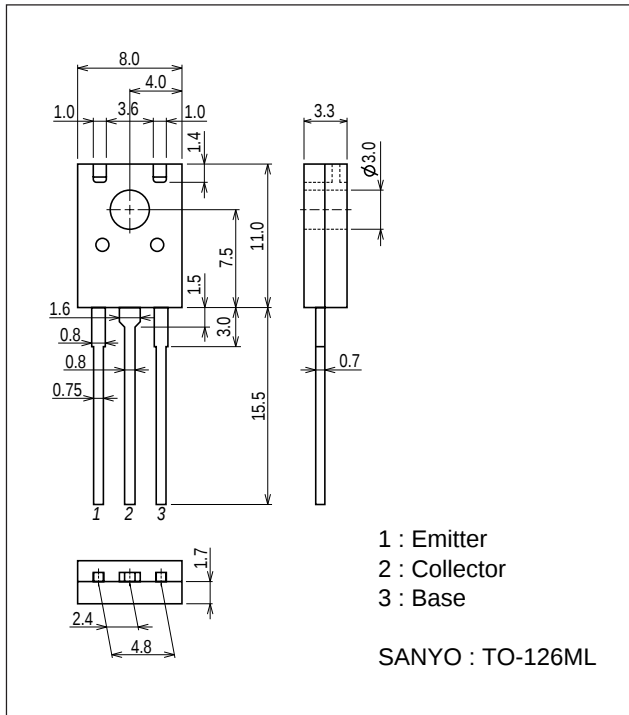
* : The 2SA1479 / 2SC3789 are classified by 10mA h_{FE} as follows:

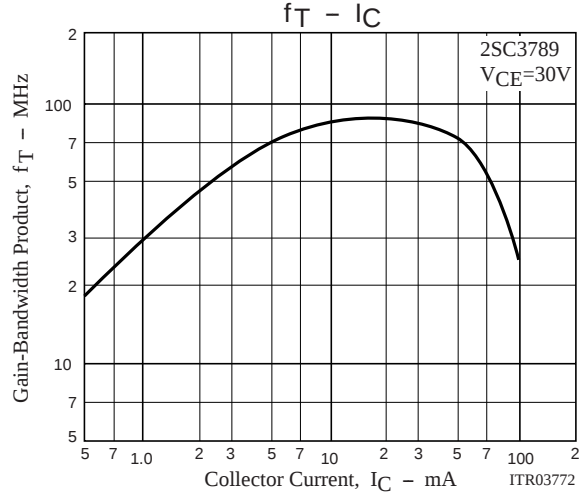
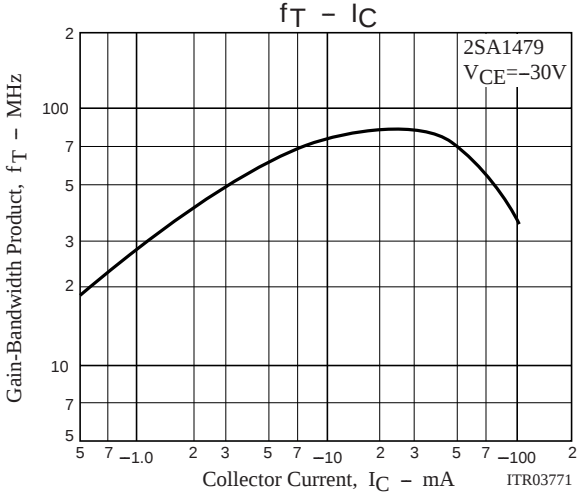
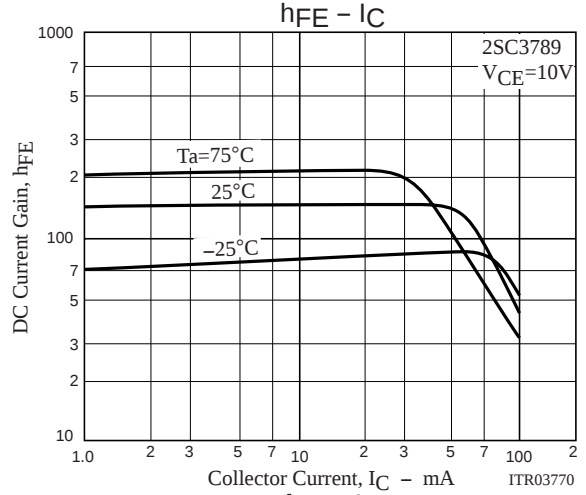
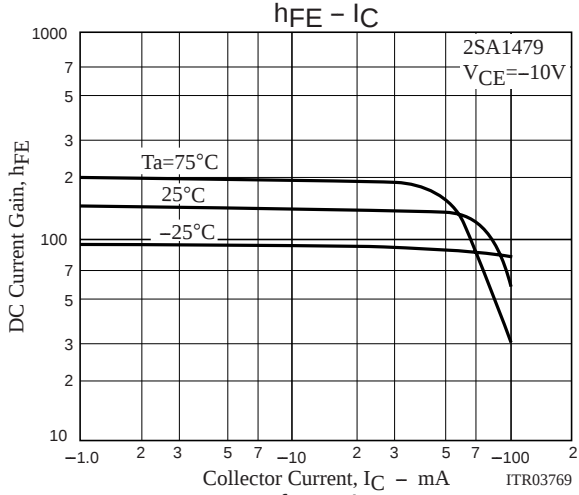
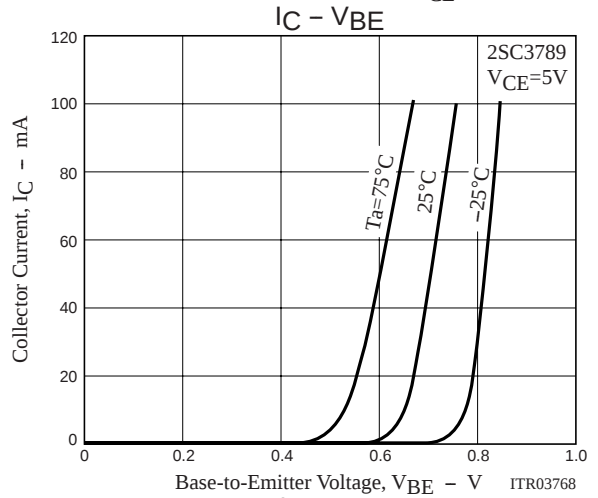
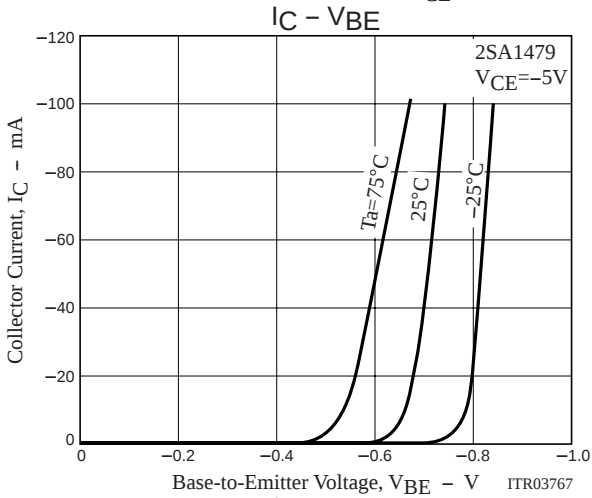
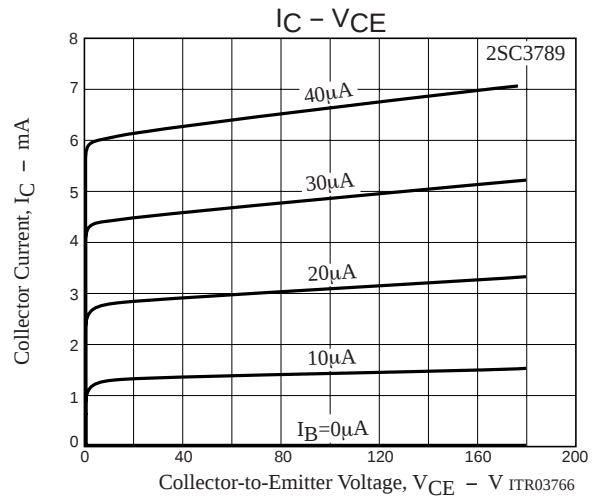
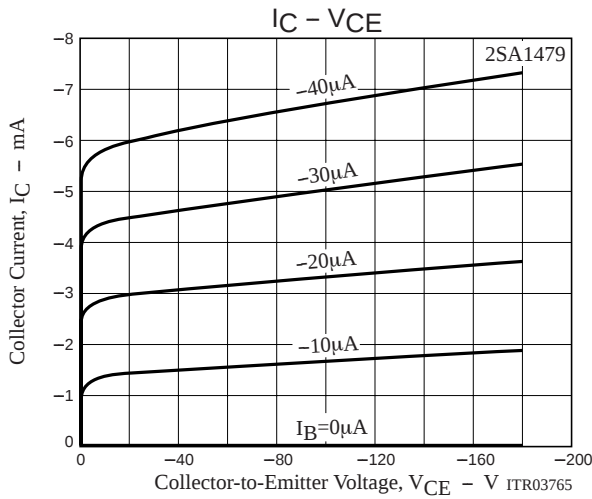
Rank	C	D	E	F
h_{FE}	40 to 80	60 to 120	100 to 200	160 to 320

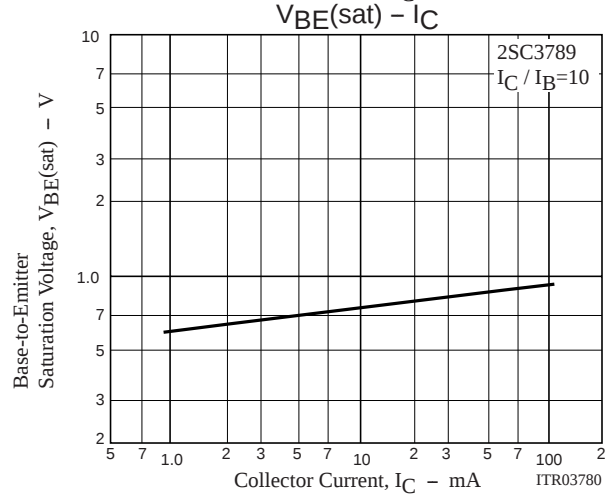
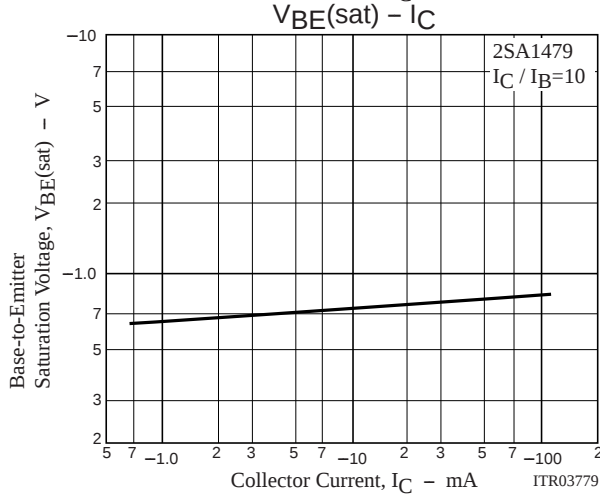
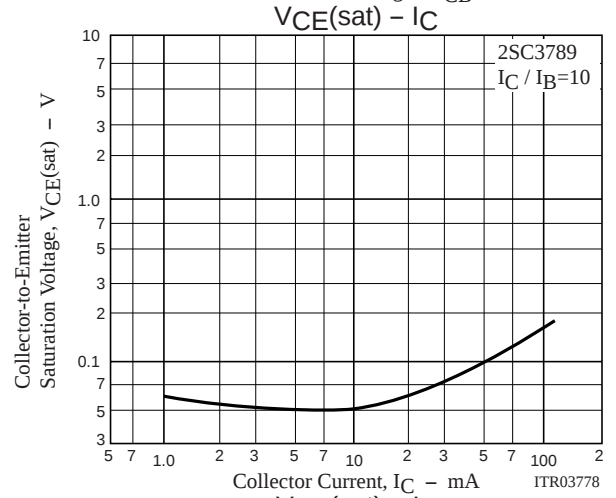
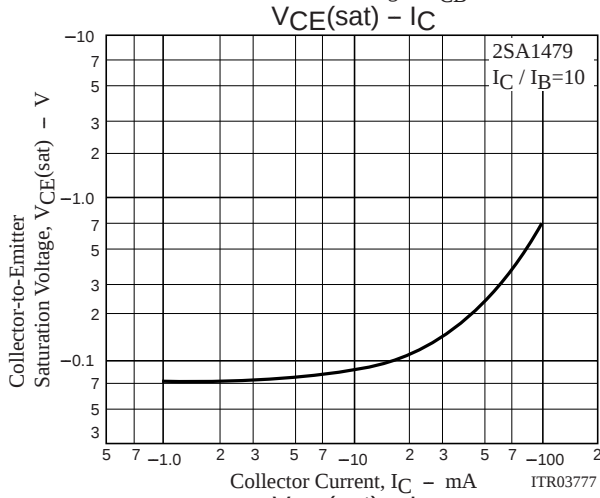
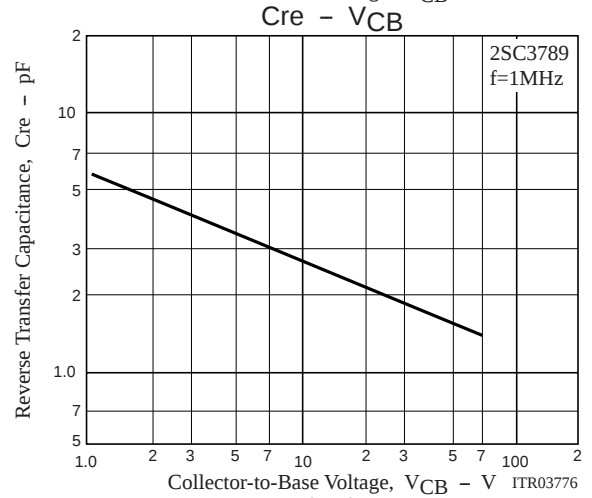
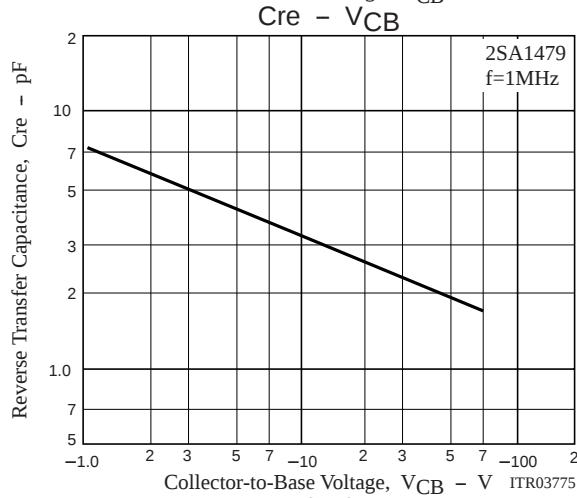
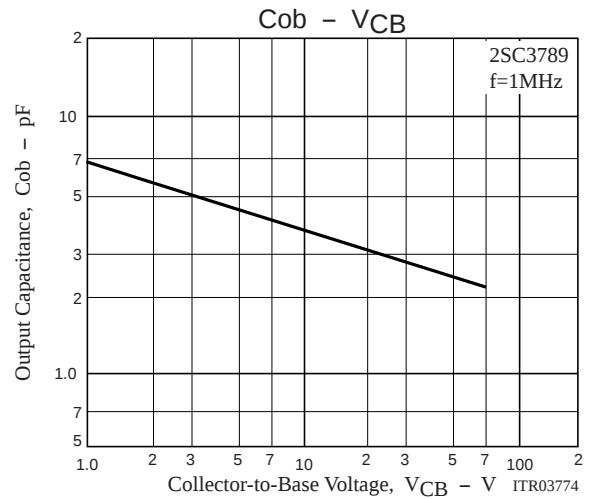
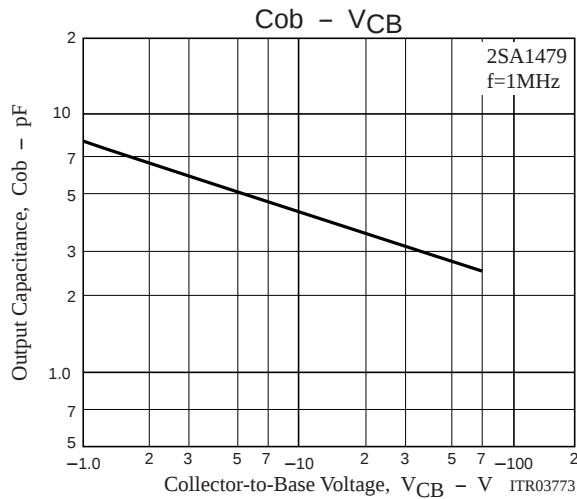
Package Dimensions

unit : mm (typ)

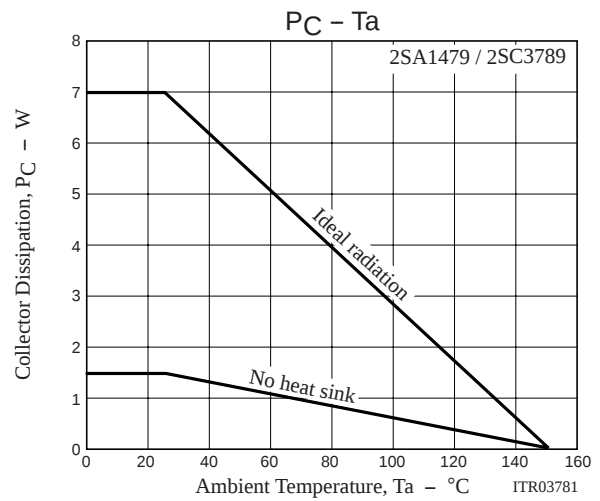
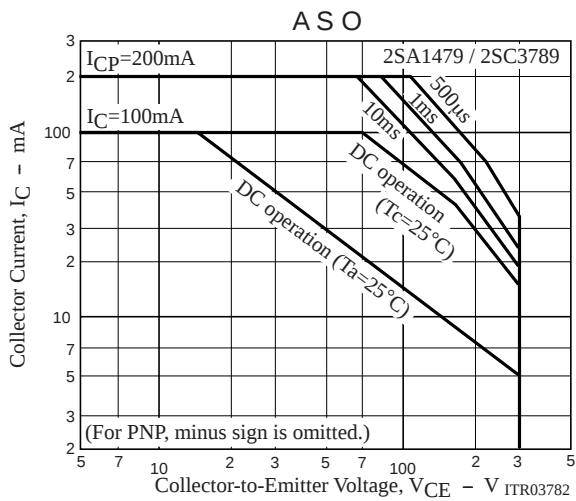
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2SA1479 / 2SC3789



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