

	No.2527A	<h2 style="margin: 0;">2SA1475/2SC3781</h2> <p style="margin: 0;">PNP/NPN Epitaxial Planar Silicon Transistors</p> <p style="margin: 0;">Very High-Definition CRT Display Video Output Applications</p>
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**Applications**

- . Video output
- . Color TV chroma output
- . Wide-band amp

**Features**

- . High  $f_T$  ( $f_T$  typ=500MHz)
- . High breakdown voltage ( $V_{CEO} \geq 120V$ )
- . Small reverse transfer capacitance and excellent HF response ( $c_{re}=2.6pF$ (NPN),  $3.9pF$ (PNP))
- . Complementary PNP and NPN types
- . Adoption of FBET process

( ): 2SA1475

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

Collector-to-Base Voltage	$V_{CBO}$	(-)120	V
Collector-to-Emitter Voltage	$V_{CEO}$	(-)120	V
Emitter-to-Base Voltage	$V_{EBO}$	(-)4	V
Collector Current	$I_C$	(-)400	mA
Peak Collector Current	$i_{cp}$	(-)600	mA
Collector Dissipation	$P_C$	1.5	W
		$T_c=50^\circ C$	
		15	W
Junction Temperature	$T_j$	150	$^\circ C$
Storage Temperature	$T_{stg}$	-55 to 150	$^\circ C$

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

			min	typ	max	unit
Collector Cutoff Current	$I_{CBO}$	$V_{CB}=(-)80V, I_E=0$			(-)0.1	$\mu A$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB}=(-)2V, I_C=0$			(-)1.0	$\mu A$
DC Current Gain	$h_{FE}(1)$	$V_{CE}=(-)10V, I_C=(-)50mA$	40		320*	
	$h_{FE}(2)$	$V_{CE}=(-)10V, I_C=(-)250mA$	20			
Gain-Bandwidth Product	$f_T$	$V_{CE}=(-)10V, I_C=(-)50mA$		500		MHz
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=(-)70mA, I_B=(-)7mA$			0.6	V
					(-0.8)	V

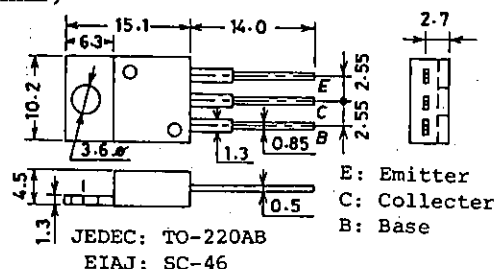
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\*:The 2SA1475/2SC3781 are classified by 50mA  $h_{FE}$  as follows:

40	C	80	60	D	120
100	E	200	160	F	320

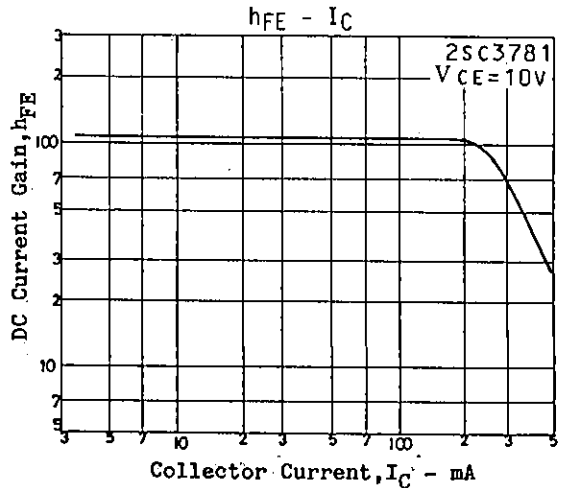
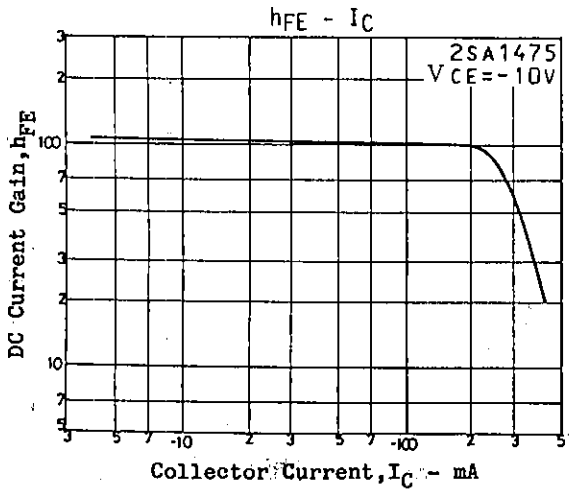
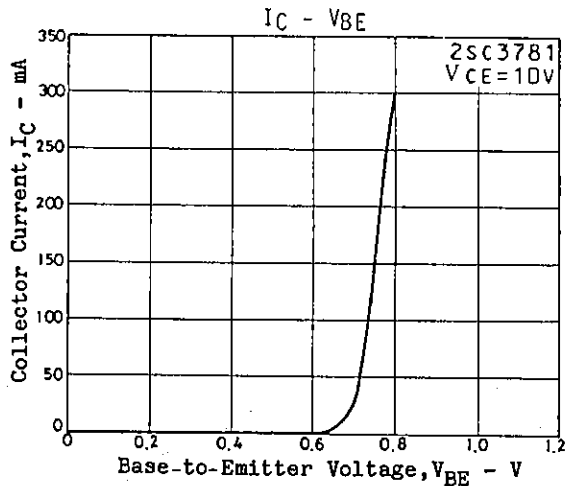
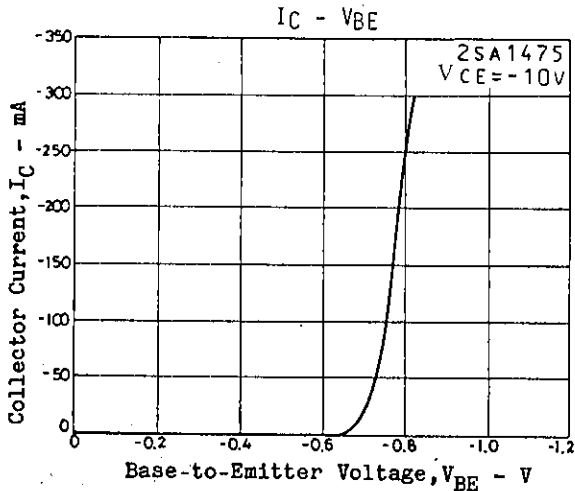
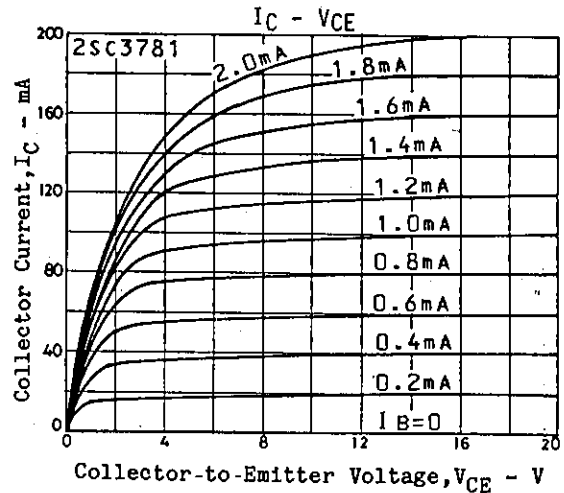
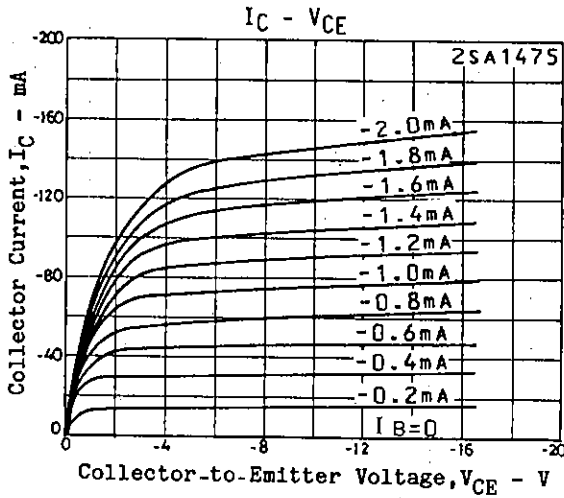
**Package Dimensions 2010A**

(unit: mm)

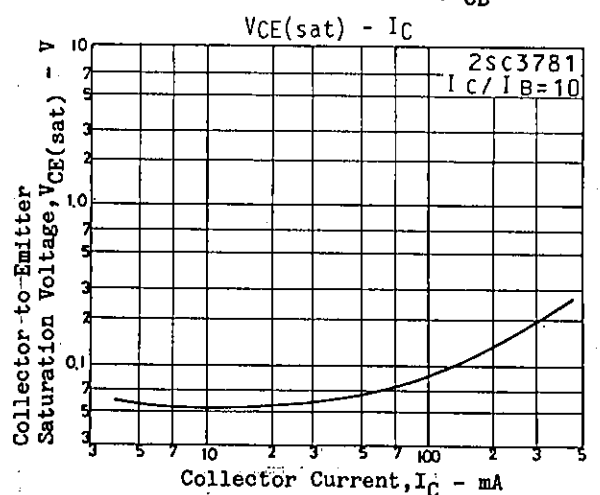
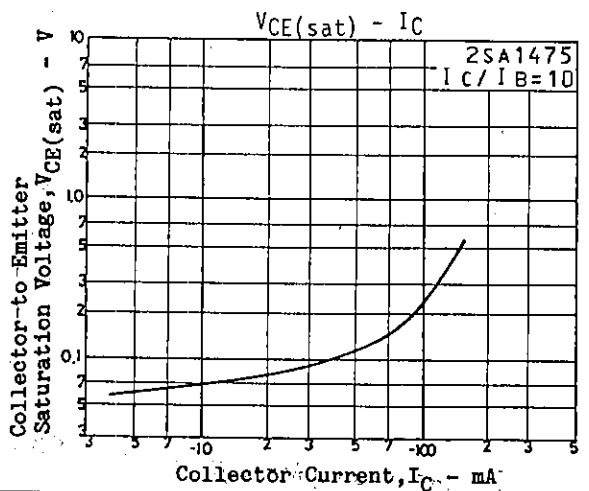
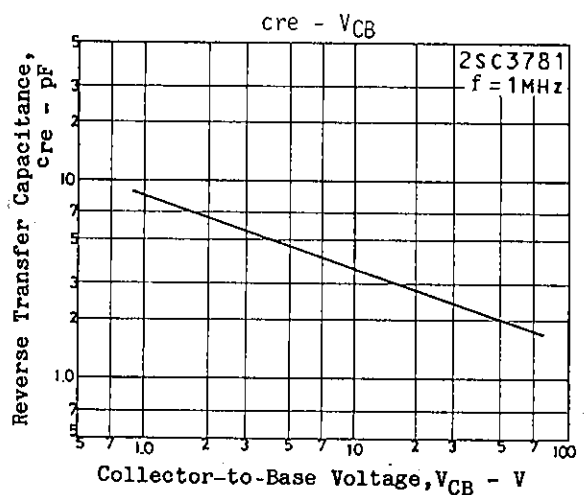
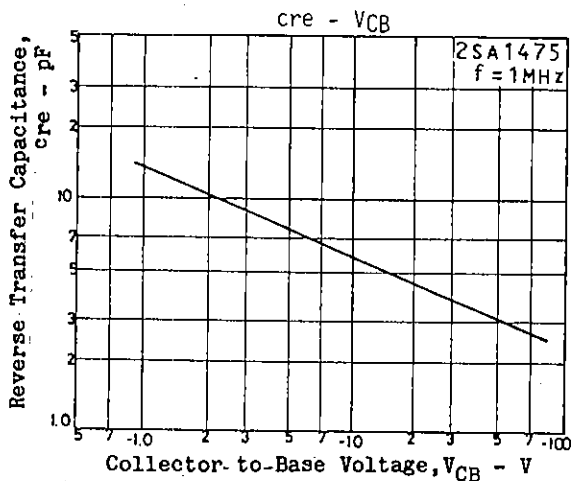
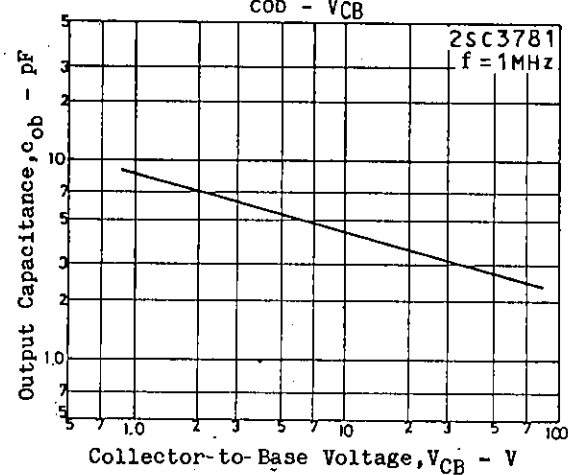
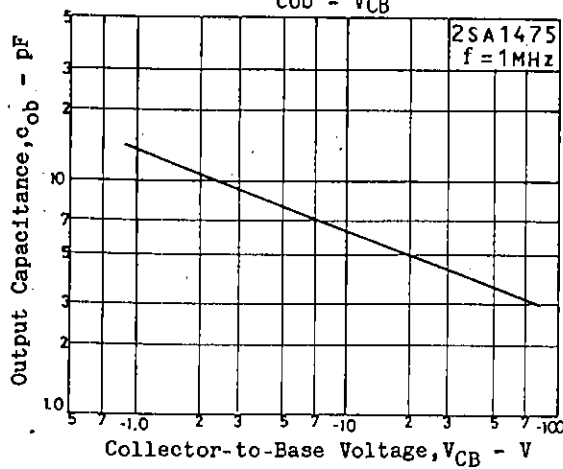
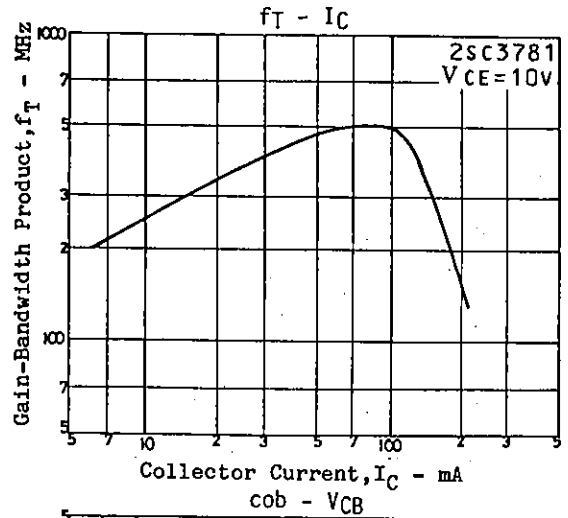
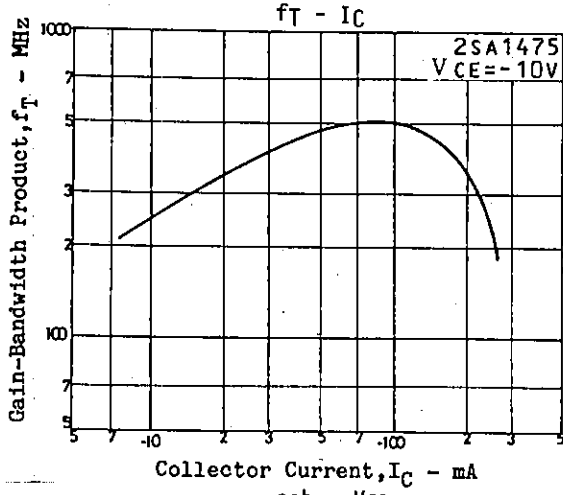


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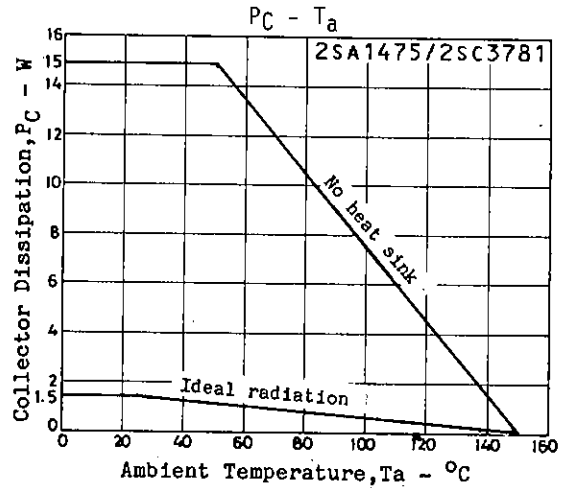
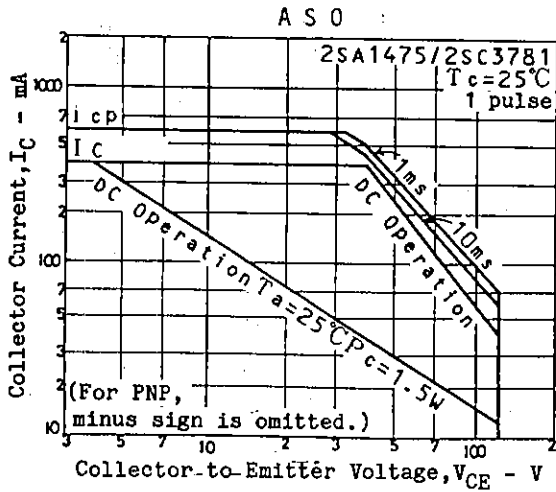
			min	typ	max	unit
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=(-)70mA, I_B=(-)7mA$			(-)1.0	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=(-)10\mu A, I_E=0$	(-)	120		V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=(-)1mA, R_{BE}=\infty$	(-)	120		V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=(-)100\mu A, I_C=0$	(-)	4		V
Output Capacitance	$c_{ob}$	$V_{CB}(-)30V, f=1MHz$		3.0(4.4)		pF
Reverse Transfer Capacitance	$c_{re}$	$V_{CB}(-)30V, f=1MHz$		2.6(3.9)		pF



2SA1475/2SC3781



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