

SANYO	No.2001A	2SA1471/2SC3748
		PNP/NPN Epitaxial Planar Silicon Transistors 60V/10A High-Speed Switching Applications

Applications

- . Car-use inductance drivers, lamp drivers
- . Inverters drivers, converters (strobos, flashes, FLT lighting circuits)
- . Power amplifiers (high-power car stereos, motor control)
- . High-speed switching (switching regulators, drivers)

Features

- . Low saturation voltage
- . Excellent dependence of h_{FE} on current
- . Fast switching speed
- . Micaless package facilitating mounting

(): 2SA1471

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

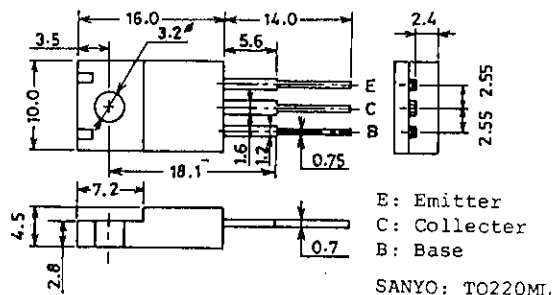
			unit
Collector-to-Base Voltage	V_{CB0}	(-)80	V
Collector-to-Emitter Voltage	V_{CEO}	(-)60	V
Emitter-to-Base Voltage	V_{EBO}	(-)5	V
Collector Current	I_C	(-)10	A
Collector Current (Pulse)	I_{CP}	(-)12	A
Collector Dissipation	P_C	2	W
		$T_c=25^{\circ}C$	30 W
Junction Temperature	T_j	150	$^{\circ}C$
Storage 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}	$V_{CB}=(-)40V, I_E=0$			(-)0.1	mA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=(-)4V, I_C=0$			(-)0.1	mA
DC Current Gain	h_{FE}	$V_{CE}=(-)2V, I_C=(-)1A$	70*		280*	
Gain Bandwidth Product	f_T	$V_{CE}=(-)5V, I_C=(-)1A$		100		MHz
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=(-)5A, I_B=(-)0.25A$			(-)0.4	V

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Package Dimensions 2041
(unit:mm)



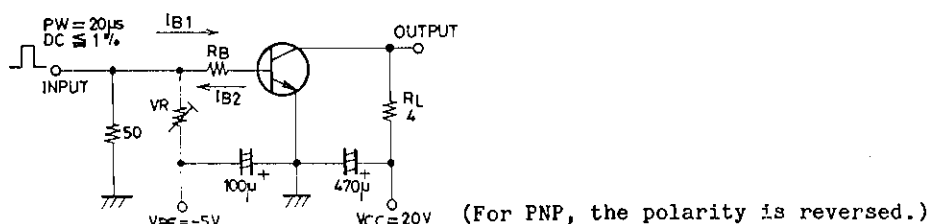
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			min	typ	max	unit
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = (-) 1mA, I_E = 0$	(-)80			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = (-) 1mA, R_{BE} = \infty$	(-)60			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = (-) 1mA, I_C = 0$	(-)5			V
Turn-ON Time	t_{on}	See specified Test Circuit.		0.1		μs
Storage Time	t_{stg}	"		0.5		μs
Fall Time	t_f	"		0.1		μs

*:The 2SA1471/2SC3748 are classified by 1A h_{FE} as follows:

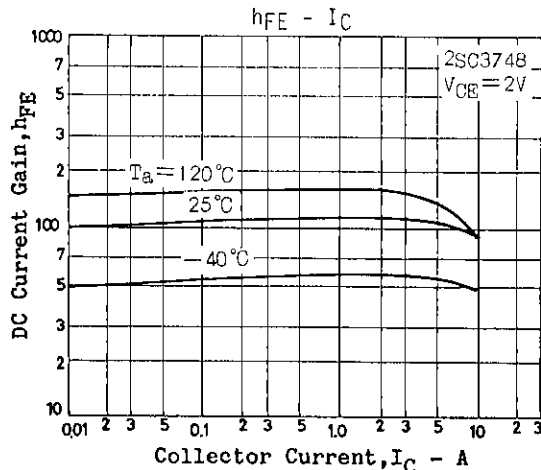
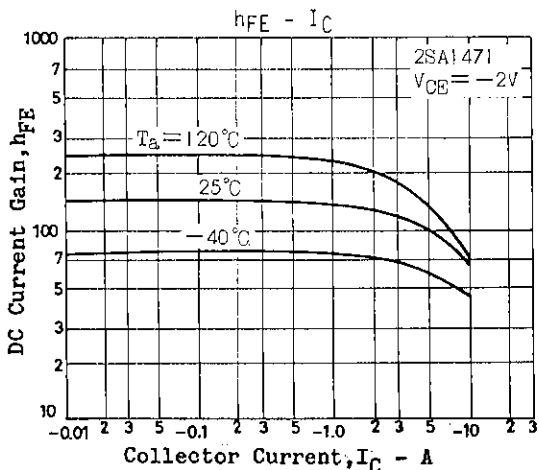
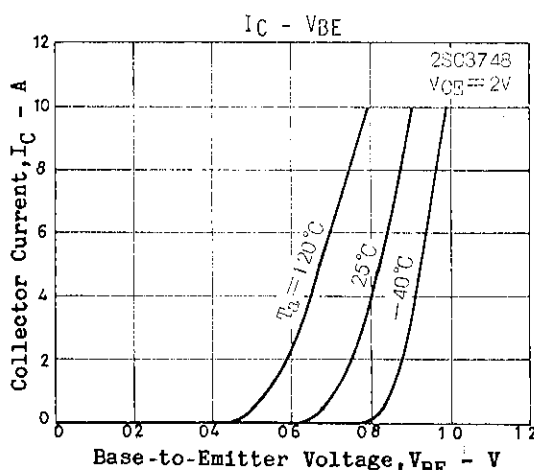
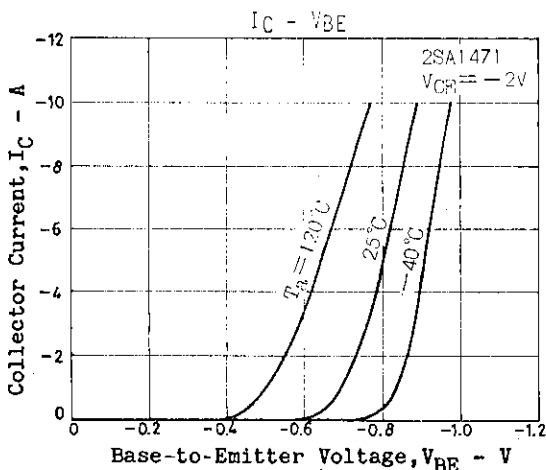
70	Q	140	100	R	200	140	S	280
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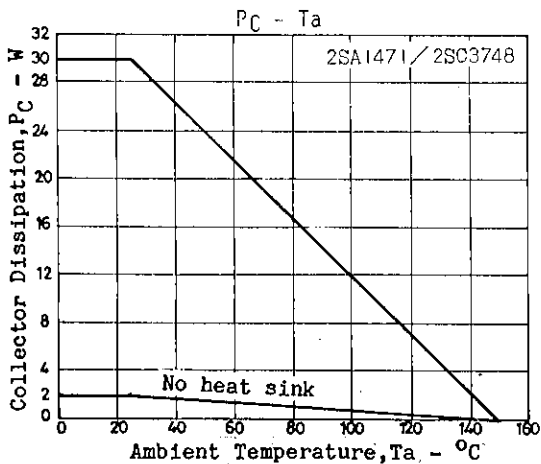
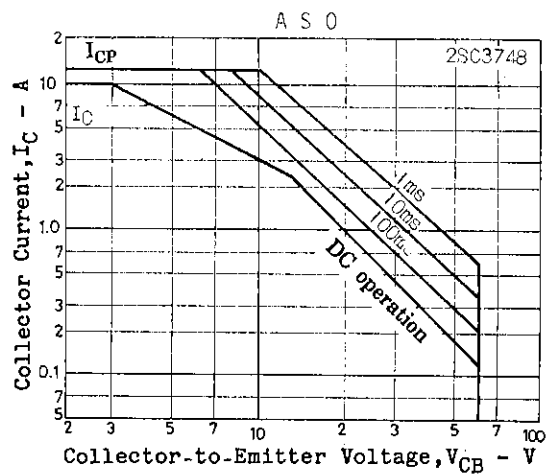
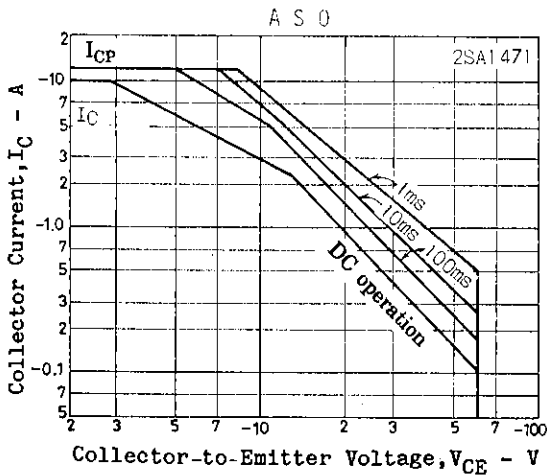
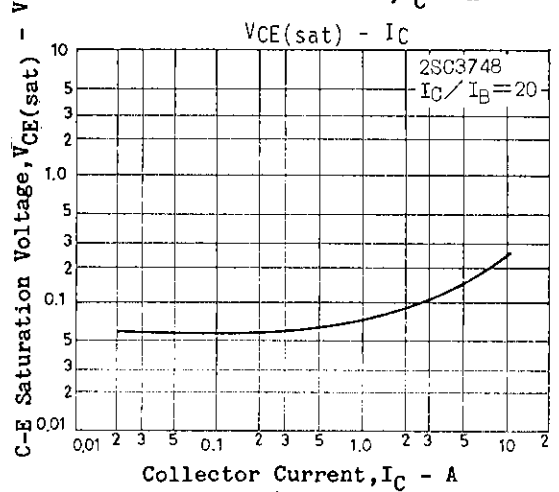
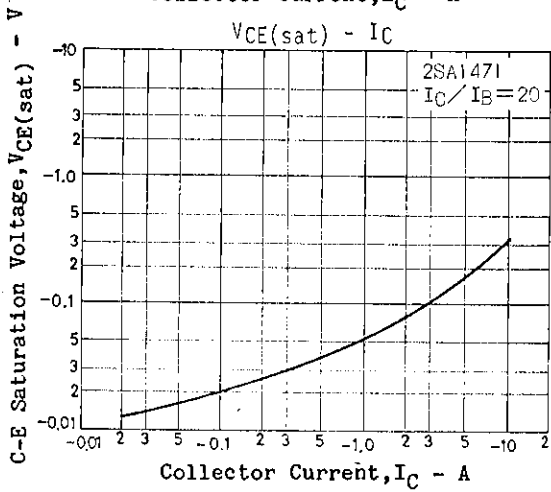
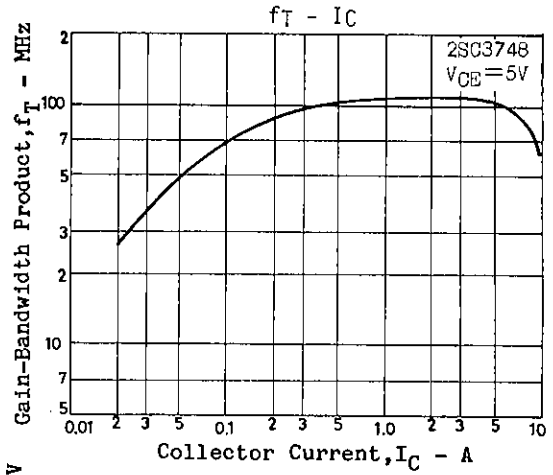
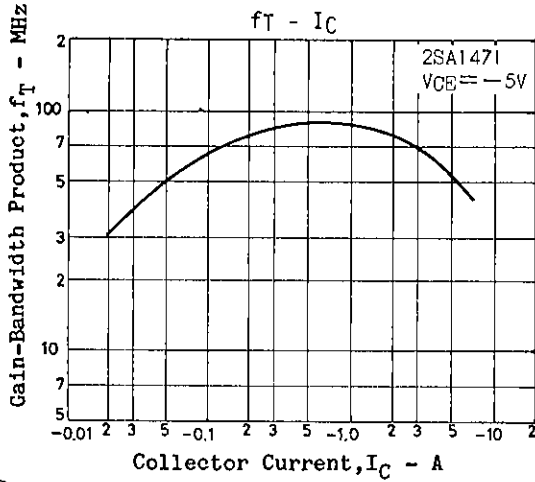
Switching Time Test Circuit



$20I_{B1} = -20I_{B2} = I_C = 5A$

Unit (resistance: Ω , capacitance: F)





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