



2SC4735

27MHz CB Transceiver Driver Applications

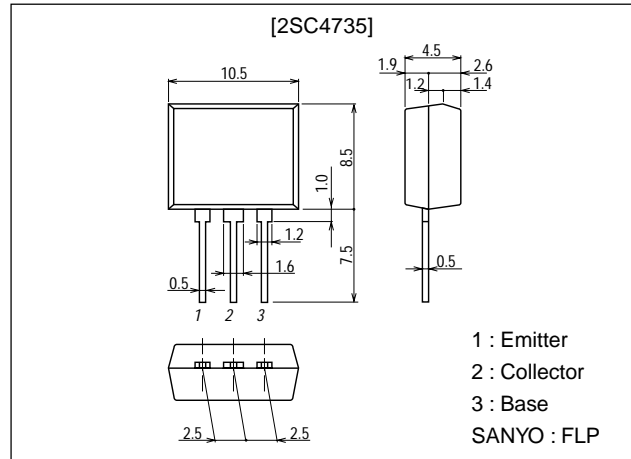
Features

- Large power type such as $P_C=1.5W$ when used without heatsink.
- It is possible to make appliances more compact because its height on board is 9.5mm.
- Effective in automatic inserting and counting stocked amount because of being provided for radial taping.

Package Dimensions

unit:mm

2084B



Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		75	V
Collector-to-Emitter Voltage	V_{CER}	$R_{BE}=150\Omega$	75	V
	V_{CEO}		45	V
Emitter-to-Base Voltage	V_{EBO}		5	V
Collector Current	I_C		1.0	A
Collector Current (Pulse)	I_{CP}		1.5	A
Base Current	I_B		200	mA
Collector Dissipation	P_C		1.5	W
Junction Temperature	T_j		150	$^\circ C$
Storage Temperature	T_{stg}		-55 to +150	$^\circ C$

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

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	$V_{CB}=40V, I_E=0$			1.0	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=4V, I_C=0$			1.0	μA
DC Current Gain	h_{FE}	$V_{CE}=5V, I_C=500mA$	60*		320*	
Gain-Bandwidth Product	f_T	$V_{CE}=10V, I_C=50mA$	180	250		MHz
Output Capacitance	C_{ob}	$V_{CB}=10V, f=1MHz$		10	20	pF

* : The 2SC4735 are classified by 500mA h_{FE} as follows :

60	D	120	100	E	200	160	F	320
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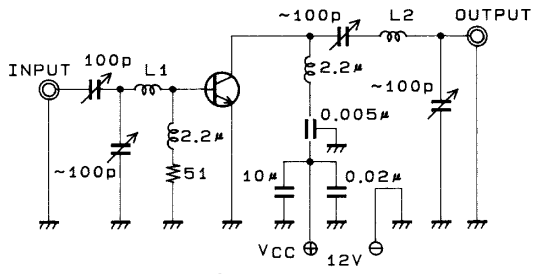
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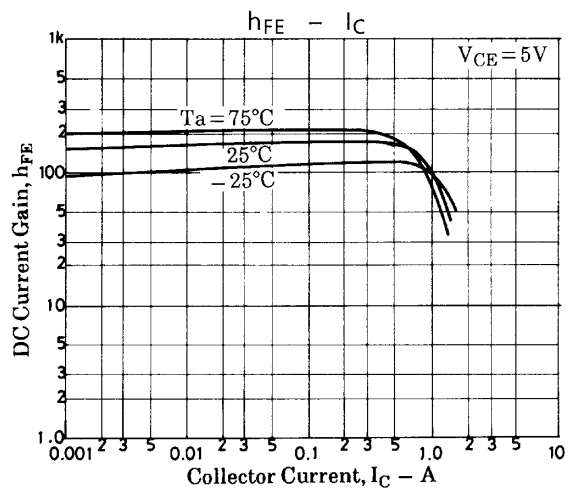
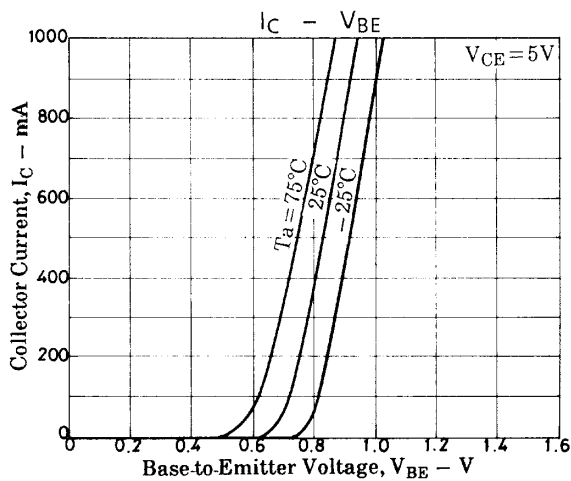
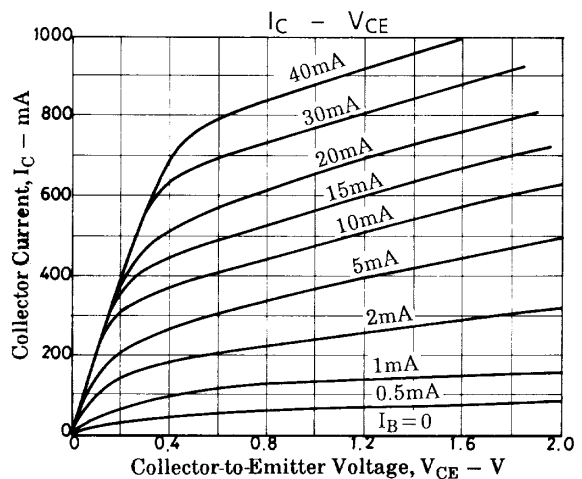
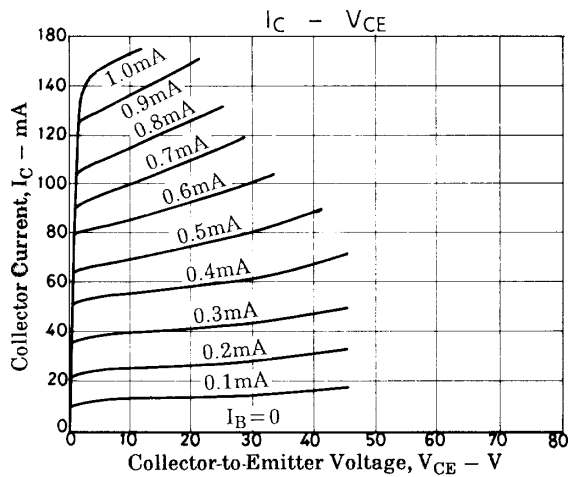
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Output Power	P_O	$V_{CC}=12V, f=27MHz, P_i=35mW$	1.0	1.8		W
Collector Efficiency	η_c	See specified test circuit.	60			%
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=500mA, I_B=50mA$		0.2	0.6	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=500mA, I_B=50mA$		0.9	1.2	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=10\mu A, I_E=0$	75			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CER}$	$I_C=1mA, R_{BE}=150\Omega$	75			V
	$V_{(BR)CEO}$	$I_C=1mA, R_{BE}=\infty$	45			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=10\mu A, I_C=0$	5			V

Collector Efficiency Test Circuit

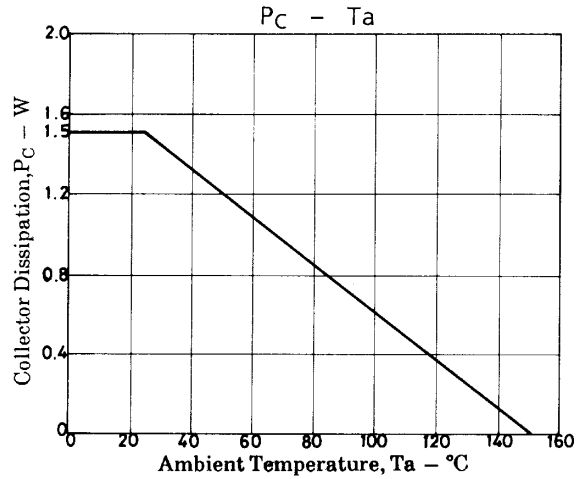
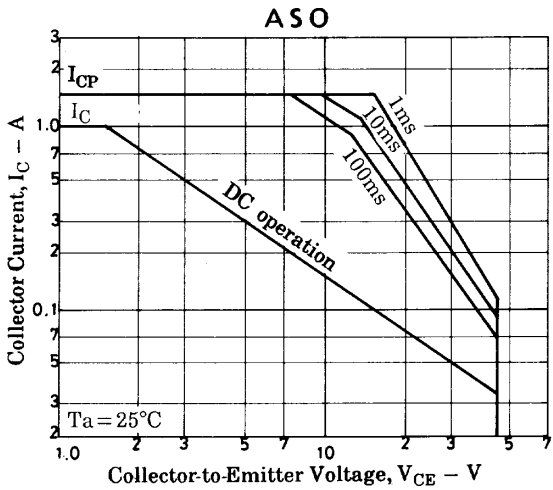
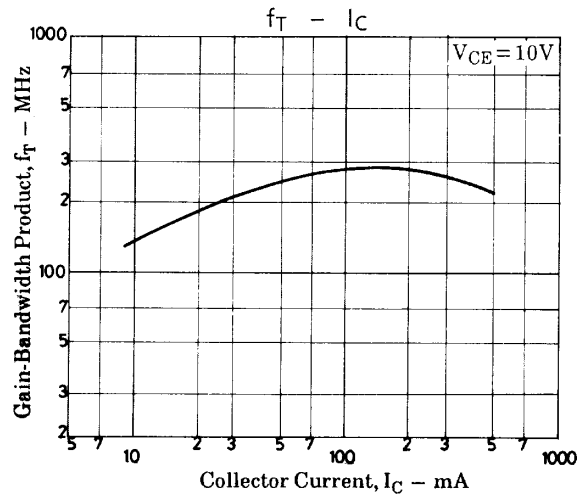
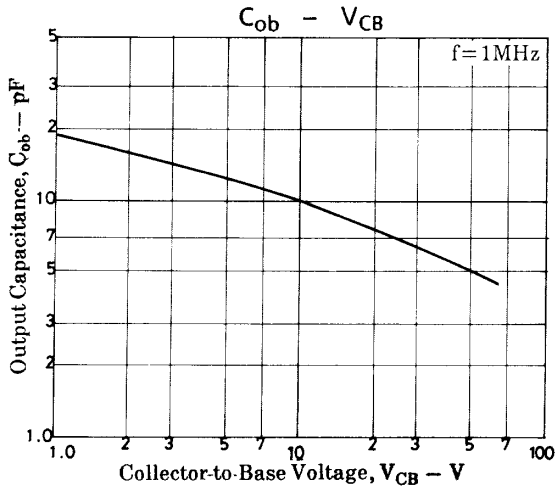
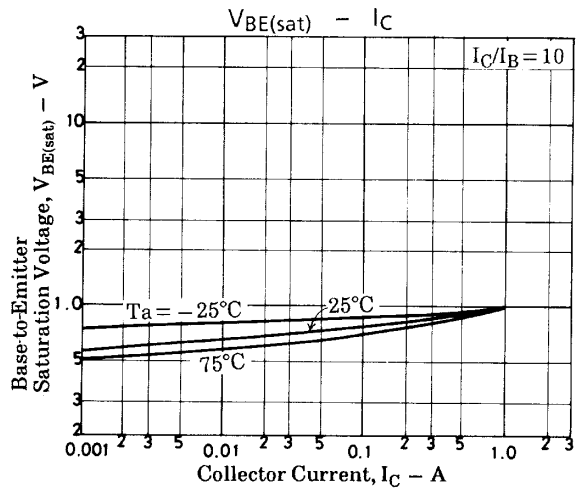
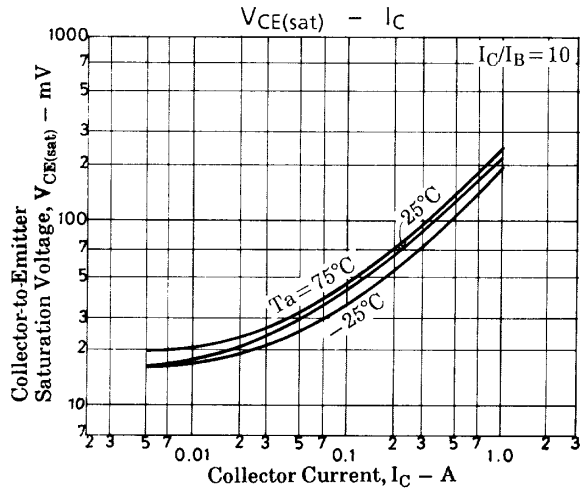


L1 : 10φ 0.6φ EC 6T
L2 : 10φ 0.6φ EC 12T

Unit (resistance : Ω, capacitance : F)



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