2SC3705



Printer Driver Applications

Applications

· Switching of L load (motor drivers, printer drivers, relay drivers).

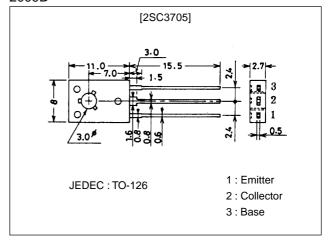
Features

- · High DC current gain.
- · Large current capacityu and wide ASO.
- · Contains a Zener diode across collector and base.

Package Dimensions

unit:mm

2009B



Specifications

Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V _{CBO}	With Zener diode (60±10V)	50	V
Collector-to-Emitter Voltage	VCEO	With Zener diode (60±10V)	50	V
Emitter-to-Base Voltage	V _{EBO}		6	V
Collector Current	lС		1.2	А
Collector Current (Pulse)	I _{CP}		2.5	А
Base Current	I _B		0.25	Α
Collector Dissipation	PC		1	W
		Tc=25°C	10	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

Electrical Characteristics at Ta = 25°C

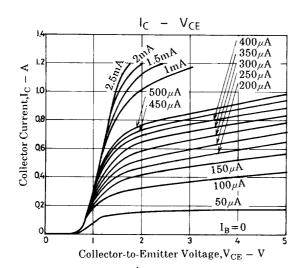
Parameter	Symbol	Conditions	Ratings			Unit
	Symbol		min	typ	max	Oill
Collector Cutoff Current	ICBO	V _{CB} =40V, I _E =0			19	μA
Emitter Cutoff Current	I _{EBO}	$V_{EB}=5V$, $I_{C}=0$			10	μA
DC Current Gain	hFE	V _{CE} =5V, I _C =0.5A	1000	4000		
Gain-Bandwidth Product	f _T	V _{CE} =5V, I _C =0.5A		180		MHz
Inductive Load Handling Capability	Es/b	L=100mH, R _{BE} =100Ω	15			mJ
Collector-to-Emitter Saturation Voltage	V _{CE(sat)}	I _C =500mA, I _B =2mA		1.0	1.5	V
Base-to-Emitter Saturation Voltage	V _{BE(sat)}	I _C =500mA, I _B =2mA			2.0	V

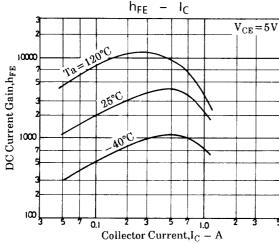
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	Oille
Collector-to-Base Breakdown Voltage	V(BR)CBO	I _C =0.1mA, I _E =0	50	60	70	V
Collector-to-Emitter Breakdown Voltage	V _(BR) CEO	I _C =1mA, R _{BE} =∞	50	60	70	V
Turn-ON Time	ton	See specified test circuit.		0.2		μs
Storage Time	t _{stg}	See specified test circuit.		2.2		μs
Fall Time	t _f	See specified test circuit.		0.4		μs

Switching Time Test Circuit

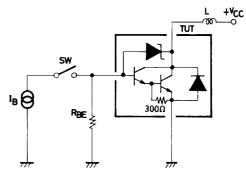
$I_{B1} = -I_{B2} = 2mA$ OUTPUT $I_{B1} = -I_{B2} = 2mA$ $I_{B2} = -I_{B2} = 2mA$ $I_{B1} = -I_{B2} = 2mA$ $I_{B2} = -I_{B2} = 2mA$ $I_{B1} = -I_{B2} = 2mA$ $I_{B2} = -I_{B2} = 2mA$ $I_{B1} = -I_{B2} = 2mA$ $I_{B2} = -I_{B2} = 2mA$ $I_{B1} = -I_{B2} = 2mA$ $I_{B2} = -I_{B2} = 2mA$ $I_{B2} = -I_{B2} = 2mA$ $I_{B1} = -I_{B2} = 2mA$ $I_{B2} = -I_{B2} = 2mA$ $I_{B1} = -I_{B2} = 2mA$ $I_{B2} = -I_{B2} = 2mA$ $I_{B1} = -I_{B2} = 2mA$ $I_{B2} = -I_{B2} = 2mA$ $I_{B2} = -I_{B2} = 2mA$ $I_{B1} = -I_{B2} = 2mA$ $I_{B2} = -I_{B2} = 2mA$

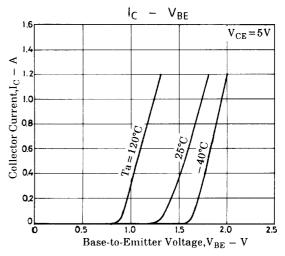


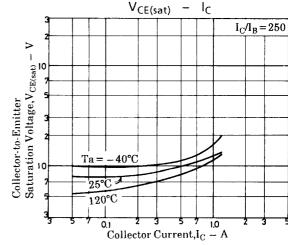


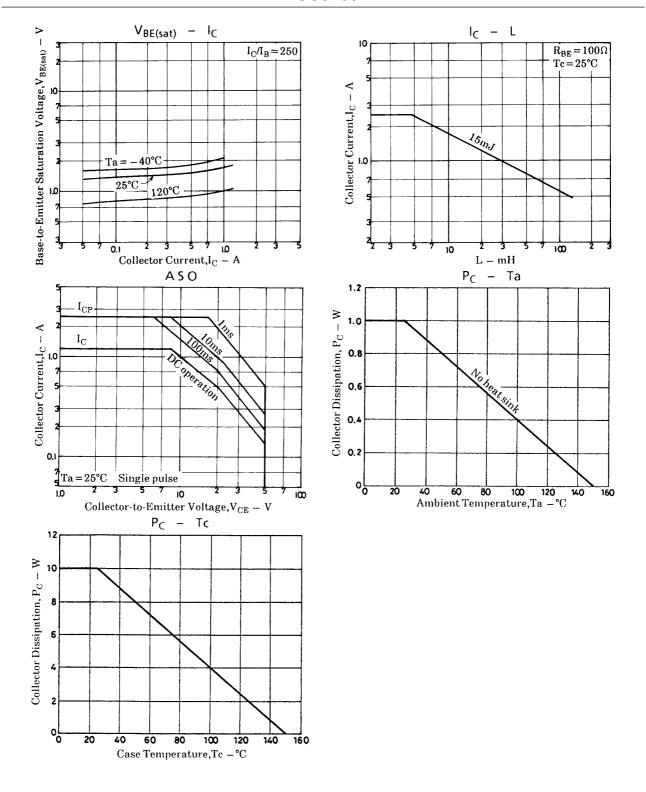
Es/b Test Circuit

 $V_{\rm CC} = 20 \text{V}, R_{\rm BE} = 100 \Omega$









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