

2SA1249/2SC3117

160V/1.5A Switching Applications

Uses

· Color TV sound output, converters, inverters.

Features

- · High breakdown voltage.
- · Large current capacity.
- · Adoption of MBIT process.

(): 2SA1249

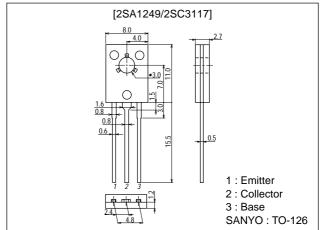
Specifications

Absolute Maximum Ratings at Ta = 25°C

Package Dimensions

unit:mm

2009B



Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V _{CBO}		(-)180	V
Collector-to-Emitter Voltage	V _{CEO}		(-)160	V
Emitter-to-Base Voltage	V _{EBO}		(–)6	V
Collector Current	lС		(-)1.5	Α
Collector Current (Pulse)	I _{CP}		(-)2.5	Α
Collector Dissipation	D _a		1	W
	P _C	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
			min	typ	max	Offic
Collector Cutoff Current	ICBO	V _{CB} =(-)120V, I _E =0			(-)1.0	μΑ
Emitter Cutoff Current	I _{EBO}	V _{EB} =(-)4V, I _C =0			(-)1.0	μA
DC Current Gain	h _{FE} 1	V _{CE} =(-)5V, I _C =(-)100mA	100*		400*	
DC Current Gain	h _{FE} 2	V _{CE} =(-)5V, I _C =(-)10mA	90*			
Gain-Bandwidth Product	f _T	V _{CE} =(-)10V, I _C =(-)50mA		120		MHz

*: 2SA1249/2SC3117 are classified by 100mA h_{FE} as follows:

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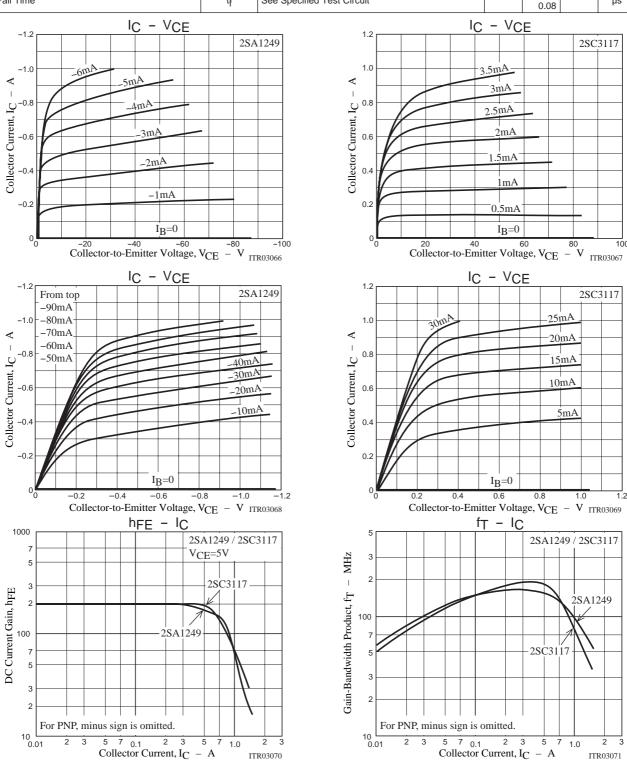
Rank	R	S	Т	
hFE	100 to 200	140 to 280	200 to 400	

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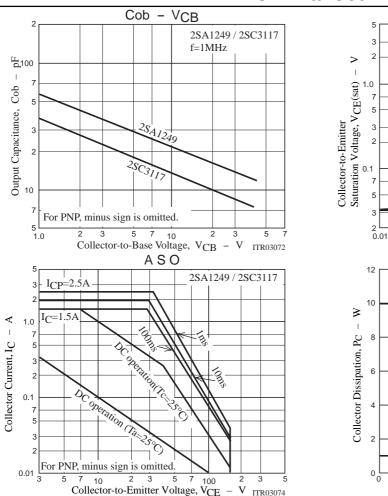
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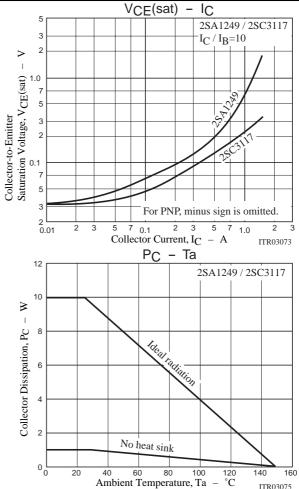
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	Oill
Output Capacitance	C _{ob}	V _{CB} =(-)10V, f=1MHz		(22)		pF
Collector-to-Emitter Saturation Voltage	V _{CE(sat)}	I _C =(-)500mA, I _B =(-)50mA		(-0.2)	(-0.5)	V
Collector-to-Efflitter Saturation Voltage				0.13	0.45	
Base-to-Emitter Saturation Voltage	V _{BE(sat)}	I _C =(-)500mA, I _B =(-)50mA		(-)0.85	(-)0.12	V
Collector-to-Base Breakdown Voltage	V(BR)CBO	I _C =(-)10μA, I _E =0	(–)180			V
Collector-to-Emitter Breakdown Voltage	V _(BR) CEO	I _C =(−)1mA, R _{BE} =∞	(-)160			V
Emitter-to-Base Breakdown Voltage	V _{(BR)EBO}	$I_{E}=(-)10\mu A, I_{C}=0$	(–)6			V
Turn-ON Time	ton	See Specified Test Circuit		0.04		μs
Storage Time	t _{stg}	See Specified Test Circuit		(0.7) 1.2		μs
Fall Time	t _f	See Specified Test Circuit		(0.04) 0.08		μs



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