

2A / 30V Bipolar transistor

2SD2679

●Applications

Low frequency amplification, driver

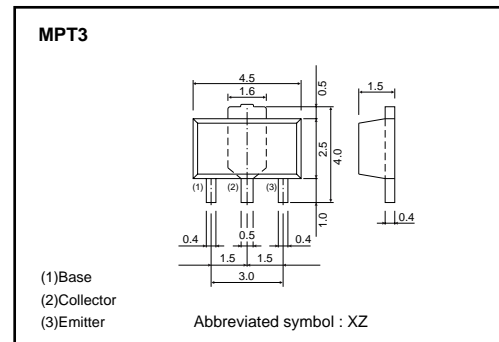
●Features

- 1) Collector current is high.
- 2) Low collector-emitter saturation voltage.
($V_{CE(sat)} \leq 350\text{mV}$ at $I_C = 1.5\text{A}$, $I_B = 75\text{mA}$)

●Structure

NPN epitaxial planar silicon transistor

●External dimensions (Unit : mm)



●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CB0}	30	V
Collector-emitter voltage	V_{CE0}	30	V
Emitter-base voltage	V_{EB0}	6	V
Collector current	DC	I_C	2
	Pulse	I_{CP}	4 *1
Power dissipation	P_C	0.5 *2	W
		2 *3	
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55 to +150	°C

*1 $P_w=1\text{ms}$, single pulse.

*2 Each terminal mounted on a recommended land.

*3 Mounted on a 40×40×0.7mm ceramic board.

●Packaging specifications

Part No.	Package	MPT3
2SD2679	Packaging type	Taping
	Code	T100
	Basic ordering unit (pieces)	1000

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-emitter breakdown voltage	BV_{CE0}	30	–	–	V	$I_C = 1\text{mA}$
Collector-base breakdown voltage	BV_{CB0}	30	–	–		$I_C = 10\mu\text{A}$
Emitter-base breakdown voltage	BV_{EB0}	6	–	–		$I_E = 10\mu\text{A}$
Collector cut-off current	I_{CBO}	–	–	100	nA	$V_{CB} = 30\text{V}$
Emitter cut-off current	I_{EBO}	–	–	100		$V_{EB} = 6\text{V}$
Collector-emitter saturation voltage	$V_{CE(sat)}$ *	–	180	370	mV	$I_C/I_B = 1.5\text{A}/75\text{mA}$
DC current gain	h_{FE}	270	–	680	–	$V_{CE} = 2\text{V}$, $I_C = 200\text{mA}$
Transition frequency	f_T	–	280	–	MHz	$V_{CE} = 2\text{V}$, $I_E = -200\text{mA}$, $f = 100\text{MHz}$
Collector output capacitance	C_{ob}	–	20	–	pF	$V_{CB} = 10\text{V}$, $I_E = 0\text{mA}$, $f = 1\text{MHz}$

* Pulsed

Transistors

●Electrical characteristics curves

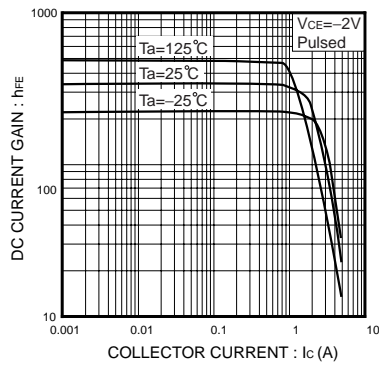


Fig.1 DC current gain vs. collector current

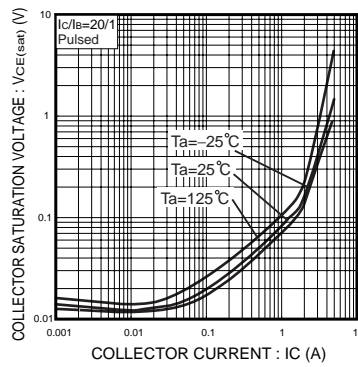


Fig.2 Collector-emitter saturation voltage vs. collector current

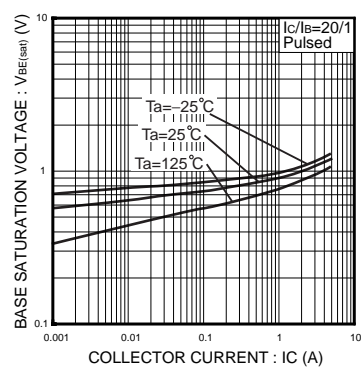


Fig.3 Base-emitter saturation voltage vs. collector current

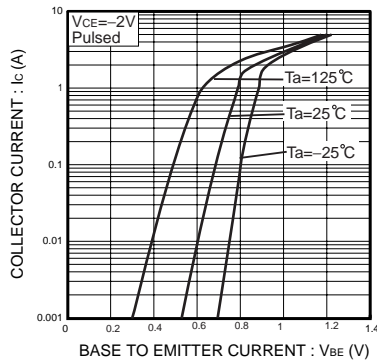


Fig.4 Grounded emitter propagation characteristics

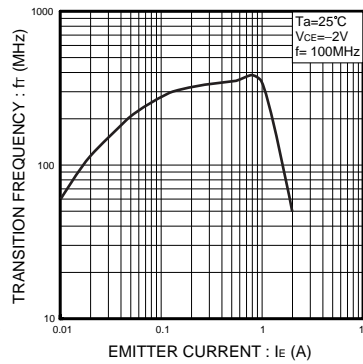


Fig.5 Gain bandwidth product vs. emitter current

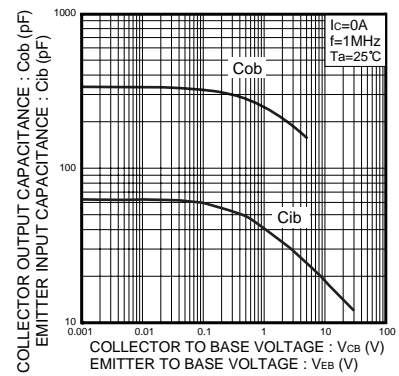


Fig.6 Collector output capacitance vs. collector-base voltage
Emitter input capacitance vs. emitter-base voltage

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