查询2SA1905供应商 捷多邦，专业PCB打样工厂，24小时加急出货

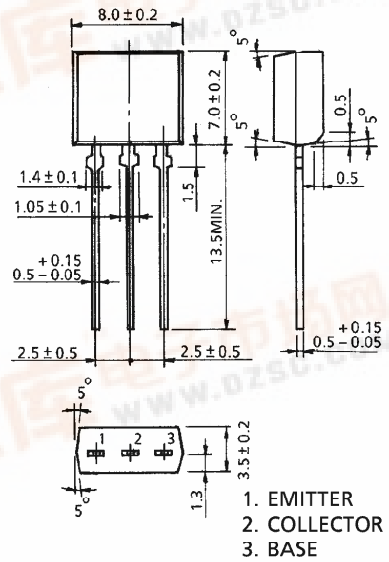
TOSHIBA TRANSISTOR SILICON PNP EPITAXIAL TYPE (PCT PROCESS)

2SA1905

HIGH CURRENT SWITCHING APPLICATIONS

Unit in mm

- Low Collector Saturation Voltage
  : $V_{CE\,(sat)} = -0.4V$ (Max.)
- High Speed Switching : $t_{stg} = 1.0\mu s$ (Typ.)
- Complementary to 2SC5076



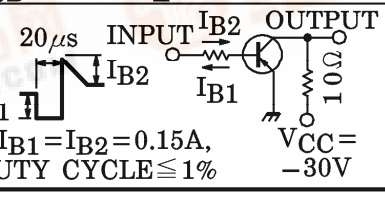
JEDEC	—
EIAJ	—
TOSHIBA	2-8M1A

Weight : 0.55g (Typ.)

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	−60	V
Collector-Emitter Voltage	V_{CEO}	−50	V
Emitter-Base Voltage	V_{EBO}	−5	V
Collector Current	I_C	−5	A
Base Current	I_B	−1	A
Collector Power Dissipation	P_C	1.3	W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	−55~150	°C

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	$V_{CB} = -50V$, $I_E = 0$	—	—	−1	μA
Emitter Cut-off Current		I_{EBO}	$V_{EB} = -5V$, $I_C = 0$	—	—	−1	μA
Collector-Emitter Breakdown Voltage		$V_{(BR)CEO}$	$I_C = -10mA$, $I_B = 0$	−50	—	—	V
DC Current Gain		$h_{FE\,(1)}$ (Note)	$V_{CE} = -1V$, $I_C = -1A$	70	—	240	
		$h_{FE\,(2)}$	$V_{CE} = -1V$, $I_C = -3A$	30	—	—	
Saturation Voltage	Collector-Emitter	$V_{CE\,(sat)}$	$I_C = -3A$, $I_B = -0.15A$	—	−0.2	−0.4	V
	Base-Emitter	$V_{BE\,(sat)}$	$I_C = -3A$, $I_B = -0.15A$	—	−0.9	−1.2	
Transition Frequency		f_T	$V_{CE} = -4V$, $I_C = -1A$	—	60	—	MHz
Collector Output Capacitance		C_{ob}	$V_{CB} = -10V$, $I_E = 0$, f = 1MHz	—	170	—	pF
Switching Time	Turn-on Time	t_{on}		—	0.1	—	μs
	Storage Time	t_{stg}		—	1.0	—	
	Fall Time	t_f		—	0.1	—	

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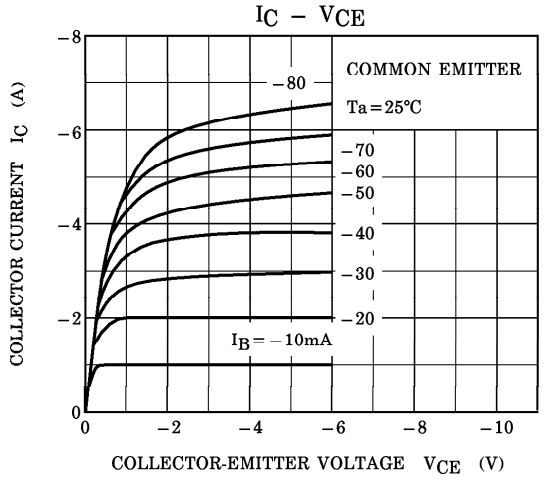
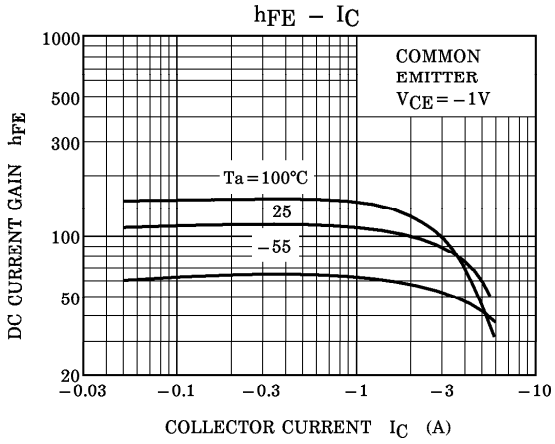
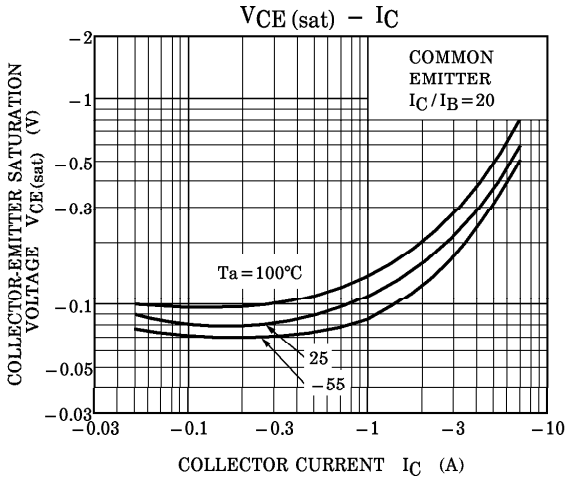
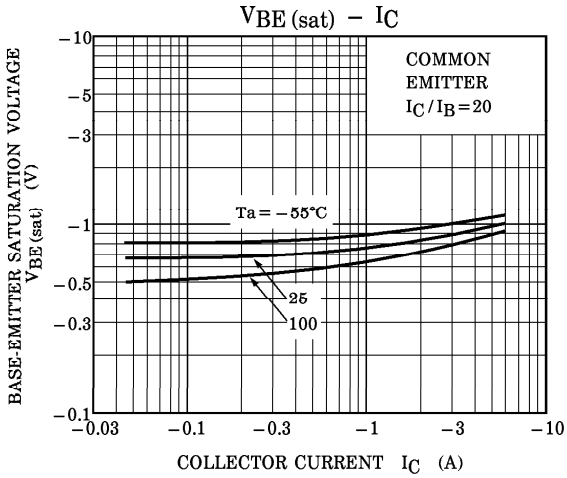
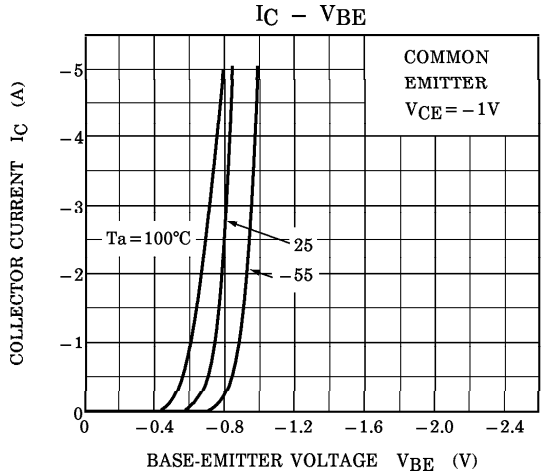
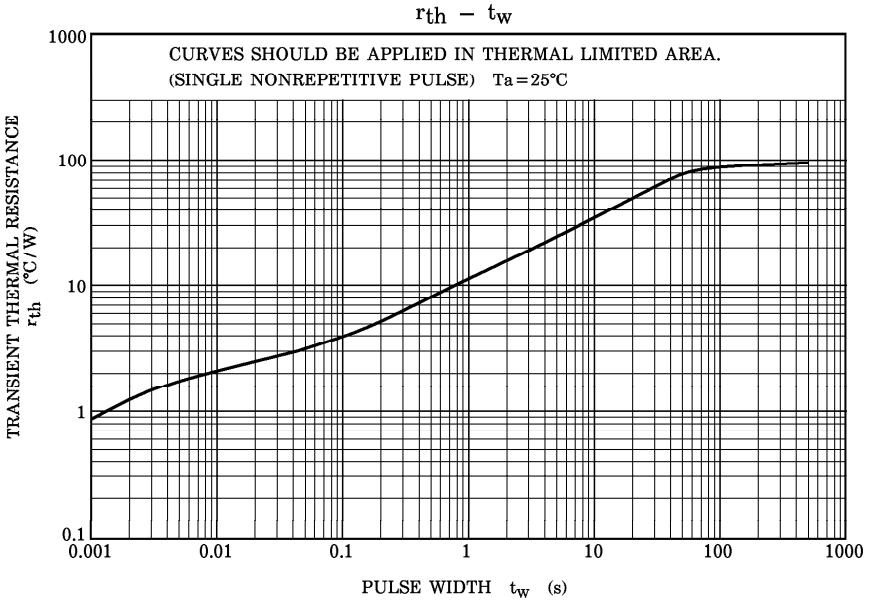

IC – VCE
COMMON EMITTER
Ta = 25°C
–80
–70
–60
–50
–40
–30
–20
IB = –10mA
COLLECTOR CURRENT IC (A)
COLLECTOR-EMITTER VOLTAGE VCE (V)

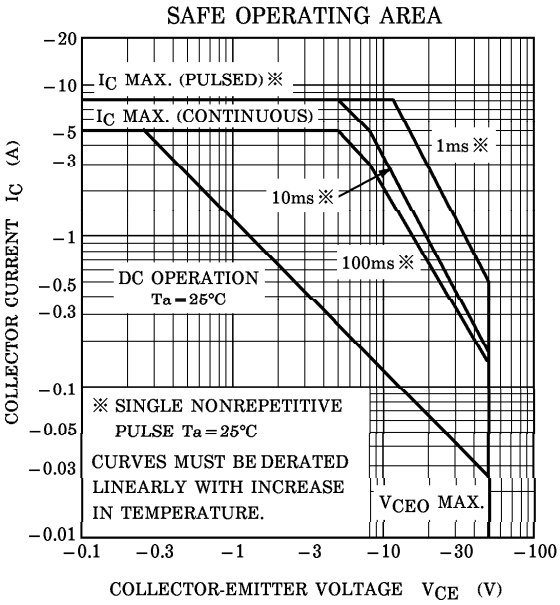

hFE – IC
COMMON EMITTER
VCE = –1V
Ta = 100°C
25
–55
DC CURRENT GAIN hFE
COLLECTOR CURRENT IC (A)

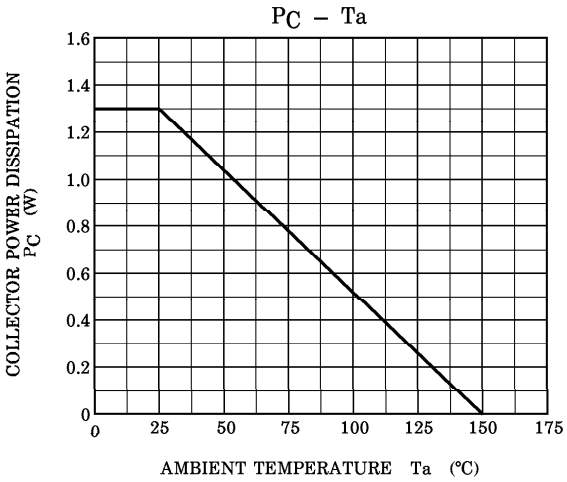

VCE (sat) – IC
COMMON EMITTER
IC / IB = 20
Ta = 100°C
25
–55
COLLECTOR-EMITTER SATURATION VOLTAGE VCE (sat) (V)
COLLECTOR CURRENT IC (A)


VBE (sat) – IC
COMMON EMITTER
IC / IB = 20
Ta = –55°C
25
100
BASE-EMITTER SATURATION VOLTAGE VBE (sat) (V)
COLLECTOR CURRENT IC (A)


IC – VBE
COMMON EMITTER
VCE = –1V
Ta = 100°C
25
–55
COLLECTOR CURRENT IC (A)
BASE-EMITTER VOLTAGE VBE (V)


rth – tw
CURVES SHOULD BE APPLIED IN THERMAL LIMITED AREA.
(SINGLE NONREPETITIVE PULSE) Ta = 25°C
TRANSIENT THERMAL RESISTANCE rth (°C/W)
1000
100
10
1
0.1
0.001
0.01
0.1
1
10
100
1000
PULSE WIDTH tw (s)


SAFE OPERATING AREA
IC MAX. (PULSED) ※
IC MAX. (CONTINUOUS)
1ms ※
10ms ※
100ms ※
DC OPERATION
Ta = 25°C
※ SINGLE NONREPETITIVE
PULSE Ta = 25°C
CURVES MUST BE DERATED
LINEARLY WITH INCREASE
IN TEMPERATURE.
VCEO MAX.
COLLECTOR CURRENT IC (A)
−20
−10
−5
−3
−1
−0.5
−0.3
−0.1
−0.05
−0.03
−0.01
−0.1
−0.3
−1
−3
−10
−30
−100
COLLECTOR-EMITTER VOLTAGE VCE (V)


PC – Ta
COLLECTOR POWER DISSIPATION PC (W)
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0
0
25
50
75
100
125
150
175
AMBIENT TEMPERATURE Ta (°C)