

Silicon PNP Transistor

2SA1075 / A1075

120V/12A

DATASHEET

OEM – Fujitsu

Source: Fujitsu Databook 1983

FUJITSU
MICROELECTRONICS

2SA1075
2SA1076

**SILICON PNP RING EMITTER
TRANSISTORS 12 AMP, 120 & 160 VOLT**

DESCRIPTION

The 2SA1075/2SA1076 are well-suited for high frequency power amplifiers, audio power amplifiers, switching regulators and DC-DC converters.

NPN complements, 2SC2525/2SC2526, are available.

FEATURES

- High $f_T = 60$ MHz (typ)
- Ultra-fast switching speed
- Excellent Safe Operating Area
- Improved reverse Second-Breakdown Capability



ABSOLUTE MAXIMUM RATINGS

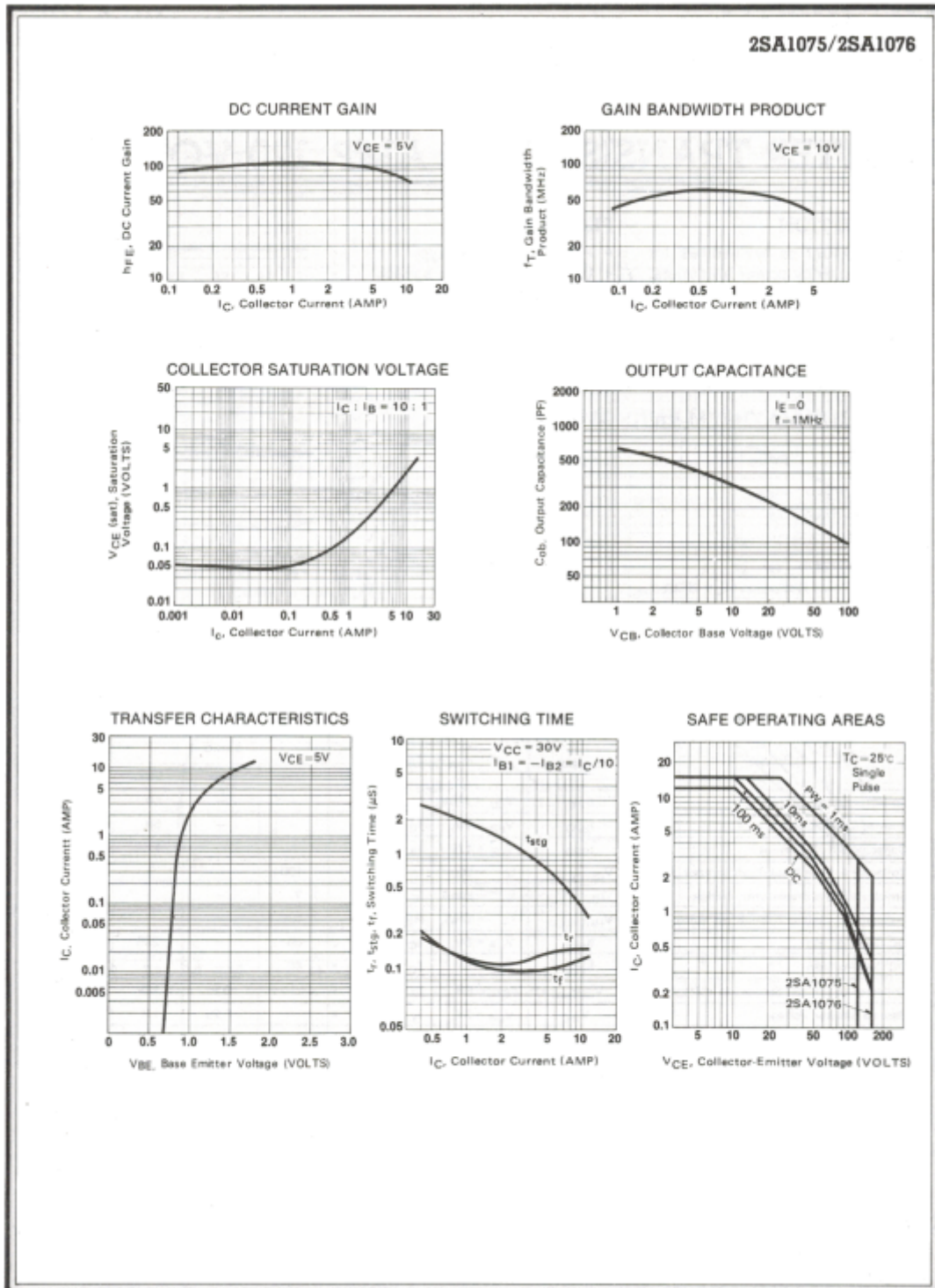
Rating	Symbol	Value		Unit
		2SA 1075	2SA 1076	
Collector to Base Voltage	V_{CBO}	120	160	V
Emitter to Base Voltage	V_{EBO}	7	7	V
Collector to Emitter Voltage	V_{CEO}	120	160	V
Collector Current	I_C	12	12	A
Collector Power Dissipation ($T_C = 25^\circ\text{C}$)	P_C	120	120	W
Junction Temperature	T_J	+150		$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-65 ~ +150		$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_B = 25^\circ\text{C}$)

Parameter	Symbol	Test Conditions	Limits						Unit
			2SA 1075			2SA 1076			
			Min	Typ.	Max.	Min.	Typ.	max.	
Collector Cutoff Current	I_{CBO}	$V_{CB} = 120\text{V}/160\text{V}, I_E = 0$	-	-	50/-	-	-	-/50	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 7\text{V}, I_C = 0$	-	-	50	-	-	50	μA
Collector Cutoff Current	I_{CEO}	$V_{CE} = 120\text{V}/160\text{V}, R_{BE} = \infty$	-	-	1/-	-	-	-/1	mA
Collector to Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 50\mu\text{A}, I_E = 0$	120	-	-	160	-	-	V
Emitter to Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 50\mu\text{A}, I_C = 0$	7	-	-	7	-	-	V
Collector to Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 1\text{mA}, R_{BE} = \infty$	120	-	-	160	-	-	V
DC Current Gain	h_{FE1}	$V_{CE} = 5\text{V}, I_C = 1\text{A}$	* 60	-	200	60	-	200	
DC Current Gain	h_{FE2}	$V_{CE} = 5\text{V}, I_C = 7\text{A}$	* 40	-	-	40	-	-	
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 5\text{A}, I_B = 0.5\text{A}$	-	0.9	1.8	-	0.9	1.8	V
Base to Emitter Voltage	V_{BE}	$V_{CE} = 5\text{V}, I_C = 5\text{A}$	-	1.25	1.7	-	1.25	1.7	V
Gain-Bandwidth Product	f_T	$V_{CE} = 10\text{V}, I_C = 1\text{A}, f = 10\text{MHz}$	45	60	-	45	60	-	MHz
Output Capacitance	C_{ob}	$V_{CB} = 10\text{V}, I_E = 0, f = 1\text{MHz}$	-	300	470	-	300	470	pF
Rise Time	t_r	$I_C = 7.5\text{A}, R_L = 4\Omega$ $I_{B1} = -I_{B2} = 0.75\text{A}$	-	0.15	-	-	0.15	-	μs
Storage Time	t_{stg}		-	0.5	-	-	0.5	-	μs
Fall Time	t_f		-	0.11	-	-	0.11	-	μs

* Pulsed: Pulse width $\leq 300\mu\text{s}$ Duty cycle $\leq 6\%$ 0%

PACKAGE TYPE: RM-60. See page 5-23 for dimensions.



TRANSISTOR PACKAGING INFORMATION

