



# 2SA 816 · 2SC 1626

PNP · NPN SILICON PLANAR EPITAXIAL POWER TRANSISTORS

## MICRO ELECTRONICS

CASE TO-220B

THE 2SA816 (PNP) AND 2SC1626 (NPN) ARE SILICON PLANAR EPITAXIAL COMPLEMENTARY PAIR SPECIALLY DESIGNED FOR THE DRIVER STAGES OF 30-50W HI-FI AMPLIFIERS. THEY ARE ALSO SUITABLE FOR MEDIUM SPEED SWITCHING UP TO 2A PEAK CURRENT.



### ABSOLUTE MAXIMUM RATINGS

For p-n-p devices, voltage and current values are negative.

Collector-Base Voltage	$V_{CB0}$	80V
Collector-Emitter Voltage	$V_{CEO}$	80V
Emitter-Base Voltage	$V_{EB0}$	5V
Collector Current	$I_C$	750mA
Collector Peak Current ( $t \leq 10\text{ms}$ )	$I_{CM}$	2A
Total Power Dissipation @ $T_C \leq 25^\circ\text{C}$	$P_{tot}$	10W
@ $T_A \leq 25^\circ\text{C}$		1.5W
Junction Temperature	$T_j$	150°C
Storage Temperature Range	$T_{stg}$	-55 to +150°C

### ELECTRICAL CHARACTERISTICS ( $T_A=25^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT	TEST CONDITIONS
Collector-Base Breakdown Voltage	$BV_{CB0}$	80			V	$I_C=0.1\text{mA}$ $I_B=0$
Collector-Emitter Breakdown Voltage	$LV_{CEO} *$	80			V	$I_C=10\text{mA}$ $I_B=0$
Collector Cutoff Current	$I_{CBO}$			0.5	$\mu\text{A}$	$V_{CB}=30\text{V}$ $I_E=0$
Emitter Cutoff Current	$I_{EBO}$			1	$\mu\text{A}$	$V_{EB}=5\text{V}$ $I_C=0$
Collector-Emitter Saturation Voltage	$V_{CE(sat)} *$			0.5	V	$I_C=500\text{mA}$ $I_B=50\text{mA}$
Base-Emitter Voltage	$V_{BE} *$			1	V	$I_C=500\text{mA}$ $V_{CE}=2\text{V}$
D.C. Current Gain (Note)	$H_{FE} 1 *$	70		240		$I_C=150\text{mA}$ $V_{CE}=2\text{V}$
	$H_{FE} 2 *$	40				$I_C=500\text{mA}$ $V_{CE}=2\text{V}$
Current Gain-Bandwidth Product	$f_T$	50	100		MHz	$I_C=150\text{mA}$ $V_{CE}=2\text{V}$
Collector-Base Capacitance	$C_{ob}$	2SA816		20	pF	$V_{CB}=10\text{V}$ $I_E=0$
		2SC1626		13	pF	$f=1\text{MHz}$

\*Pulse Test : Pulse Width=0.3ms, Duty Cycle=1%

note :  $H_{FE} 1$  is classified as follows. Group 0 : 70-140, Group Y : 120-240

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1-2-BMP

TYPICAL CHARACTERISTICS

( $T_A=25^\circ\text{C}$  unless otherwise noted)

