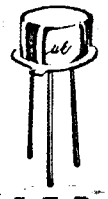
2N4030 THROUGH 2N4033

PNP SILICON AF MEDIUM POWER AMPLIFIERS & SWITCHES

THE 2N4030 THROUGH 2N4033 ARE PNP SILICON PLANAR EPITAXIAL TRANSISTORS FOR AF MEDIUM POWER DRIVERS AND OUTPUTS, AS WELL AS FOR SWITCHING APPLICATIONS UP TO 1 AMPERE. THE 2N4030, 2N4031, 2N4032, 2N4033 ARE COMPLEMENTARY TO THE NPN 2N3108, 2N3020, 2N3107, 2N3019 RESPECTIVELY.

CASE TO-39



C E B

ABSOLUTE MAXIMUM RATINGS

		2N4030 2N4032	2N4031 2N4033
Collector-Base Voltage	$-V_{CBO}$	60V	80V
Collector-Emitter Voltage	$-V_{CEO}$	60V	80V
Emitter-Base Voltage	$-V_{EBO}$	5V	5V
Collector Current	$-I_C$	1A	
Total Power Dissipation ($T_C \leq 25^oC$)	P_{tot}	4W	
($T_A \leq 25^oC$)		800mW	
Operating Junction & Storage Temperature	T_j, Tstg	-65 to 200°C	

ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

PARAMETER	SYMBOL	MIN	MAX	UNIT	TEST CONDITIONS
Collector-Base Breakdown Voltage	$-BV_{CBO}$				$-I_C$=0.01mA I_E=0
2N4030, 2N4032		60		V	
2N4031, 2N4033		80		V	
Collector-Emitter Breakdown Voltage	$-LV_{CEO}$ *				$-I_C$=10mA I_B=0
2N4030, 2N4032		60		V	
2N4031, 2N4033		80		V	
Emitter-Base Breakdown Voltage	$-BV_{EBO}$	5		V	$-I_E$=0.01mA I_C=0
Collector Cutoff Current	$-I_{CBO}$				
2N4030, 2N4032			50	nA	$-V_{CB}$=50V I_E=0
2N4031, 2N4033			50	nA	$-V_{CB}$=60V I_E=0
Collector Cutoff Current	$-I_{CBO}$				
2N4030, 2N4032			50	µA	$-V_{CB}$=50V I_E=0 T_A=150°C
2N4031, 2N4033			50	µA	$-V_{CB}$=60V I_E=0 T_A=150°C
Collector-Emitter Saturation Voltage	$-V_{CE(sat)}$*		0.15	V	$-I_C$=150mA $-I_B$=15mA
			0.5	V	$-I_C$=500mA $-I_B$=50mA
2N4030, 2N4032 only	$-V_{CE(sat)}$*		1.0	V	$-I_C$=1A $-I_B$=0.1A
Base-Emitter Saturation Voltage	$-V_{BE(sat)}$*		0.9	V	$-I_C$=150mA $-I_B$=15mA
Base-Emitter Voltage	$-V_{BE}$ *		1.1	V	$-I_C$=500mA $-V_{CE}$=0.5V
2N4030, 2N4032 only			1.2	V	$-I_C$=1A $-V_{CE}$=1V

MICRO ELECTRONICS LTD.
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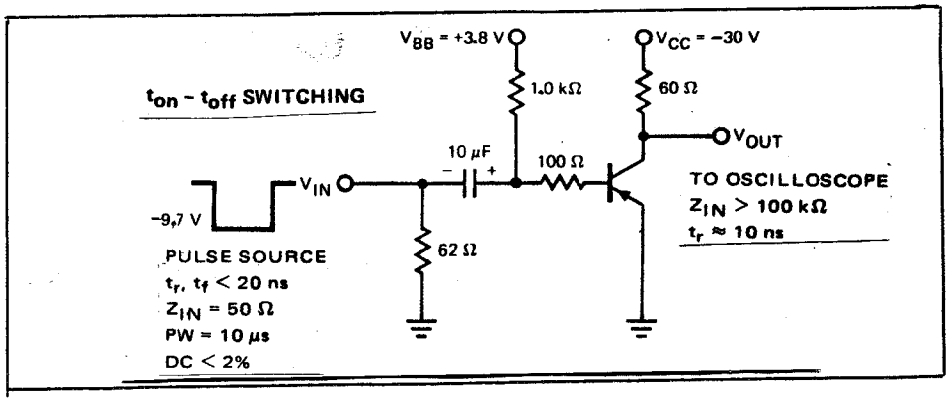
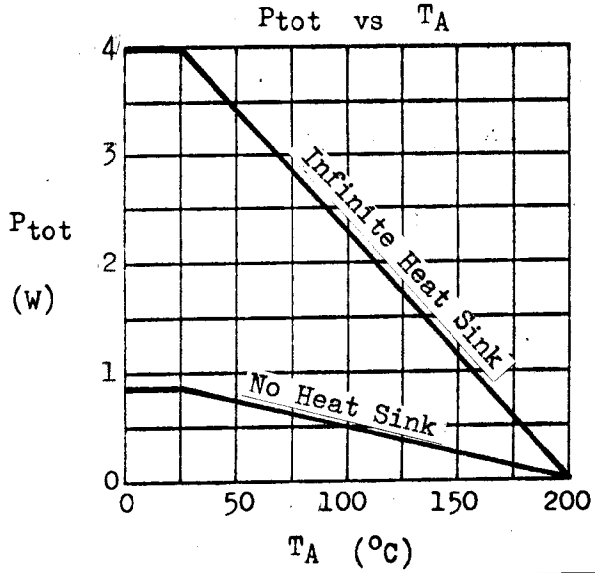
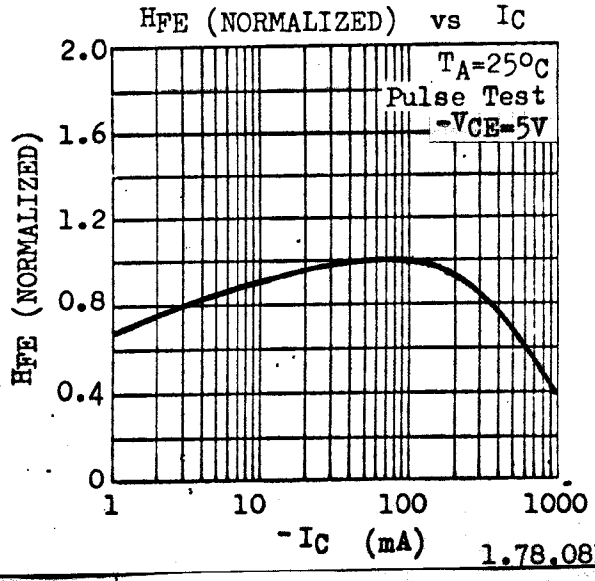
TELEPHONE:- 3-430181-6 ~~3-893363, 3-892423~~
FAX: 3-410321

PARAMETER	SYMBOL	MIN	MAX	UNIT	TEST CONDITIONS
D.C. Current Gain 2N4030, 2N4031 only	H_{FE} *	30			$-I_C$=0.1mA $-V_{CE}$=5V
		40	120		$-I_C$=100mA $-V_{CE}$=5V
		25			$-I_C$=500mA $-V_{CE}$=5V
D.C. Current Gain 2N4032, 2N4033 only	H_{FE} *	75			$-I_C$=0.1mA $-V_{CE}$=5V
		100	300		$-I_C$=100mA $-V_{CE}$=5V
		70			$-I_C$=500mA $-V_{CE}$=5V
D.C. Current Gain 2N4030	H_{FE} *	15			$-I_C$=1A $-V_{CE}$=5V
2N4031		10			
2N4032		40			
2N4033		25			
D.C. Current Gain 2N4030, 2N4031	H_{FE} *	15			$-I_C$=100mA $-V_{CE}$=5V T_A=-55°C
2N4032, 2N4033		40			
Current Gain-Bandwidth Product	f_T				$-I_C$=50mA $-V_{CE}$=10V
2N4030, 2N4031		100	400	MHz	
2N4032, 2N4033		150	500	MHz	
Collector-Base Capacitance	Cob		20	pF	$-V_{CB}$=10V I_E=0 f=1MHz
Emitter-Base Capacitance	Cib		110	pF	$-V_{EB}$=0.5V I_C=0 f=1MHz
Turn-On Time	ton		100	nS	$-I_C$=500mA $-I_{B1}$=50mA
Storage Time	t_s		350	nS	$-I_C$=500mA $-I_{B1}=I_{B2}$=50mA
Fall Time	t_f		50	nS	$-I_C$=500mA $-I_{B1}=I_{B2}$=50mA

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







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