

ENGINEERING DEVICE SPECIFICATION

NO. 6079/2N2698
SILICON TRANSISTOR

GENERAL DESCRIPTION

This device is an NPN Triple Diffused Planar Power Transistor packaged in an HD case, designed primarily for switching applications at or below a collector current of 5 amperes.

DESIGN LIMITS

General Assembly & Parts List DR 4587

Storage Temperature, T_{stg}

Operating Junction Temperature

Collector Current

Base Current

Continuous Power Dissipation at 100°C

Thermal Resistance

-65°C to 200°C

-65°C to 200°C

5 A Max.

.5 A Max.

10 Watts

10°C/W

PERFORMANCE CHARACTERISTICS, $T_C = 25 \pm 3^\circ\text{C}$ (unless noted)

Symbol	Condition	Limit
BV_{CBO}	$I_{CBO} = 10 \mu\text{A}$	100 V Min.
BV_{EBO}	$I_{EBO} = 10 \mu\text{A}$	8 V Min.
BV_{CEO}	$I_{CEO} \leq 10 \text{ MA}$	80 V Min.
I_{CEX}	$V_{CE} = 60 \text{ V}, V_{EB} = 0.5 \text{ V}, T_C = 150^\circ\text{C}$	50 μA Max.
I_{CEX}	$V_{CE} = 100 \text{ V}, V_{EB} = 0.5 \text{ V}$	10 μA Max.
I_{CBO}	$V_{CB} = 60 \text{ V}$	0.1 μA Max.
I_{EBO}	$V_{EB} = 8 \text{ V}$	10 μA Max.
$V_{CEO}(\text{sus})$	$I_C = 100 \text{ MA}^*$	70 V Min.
h_{FE}	$I_C = 1 \text{ A}, V_{CE} = 2 \text{ V}^*$	40 - 120
h_{FE}	$I_C = 1 \text{ A}, V_{CE} = 2 \text{ V}, T_C = -55^\circ\text{C}^*$	10 Min.
h_{FE}	$I_C = 5 \text{ A}, V_{CE} = 6 \text{ V}^*$	15 Min.
$V_{CE}(\text{Sat})$	$I_C = 1.0 \text{ A}, I_B = 100 \text{ MA}^*$	0.5 V Max.
$V_{CE}(\text{Sat})$	$I_C = 5 \text{ A}, I_B = 500 \text{ MA}^*$	3.0 V Max.
$V_{BE}(\text{Sat})$	$I_C = 1.0 \text{ A}, I_B = 100 \text{ MA}^*$	1.5 V Max.
$V_{BE}(\text{Sat})$	$I_C = 5.0 \text{ A}, I_B = 500 \text{ MA}^*$	2.5 V Max.

* Pulsed 330 μs , 2% duty cycle, square wave

MINNEAPOLIS-HONEYWELL REGULATOR CO.

RIVIERA BEACH, FLORIDA

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SECTION I

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<u>Symbol</u>	<u>Condition</u>	<u>Limit</u>
h_{fe}	$I_C = 0.2 \text{ A}, V_{CE} = 10 \text{ V}, f = 10 \text{ MC}$	2 Min.
t_r	(Appendix A)	80 ns Max.
t_s	(Appendix A)	60 ns Max.
t_f	(Appendix A)	80 ns Max.
t_{ON}	(Appendix B)	0.1 μsec Max.
t_{OFF}	(Appendix B)	1.5 μsec Max.
C_{ob}	$V_{CB} = 10 \text{ V}, I_C = 0, f = 1 \text{ MC}$	150 pf Max.

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