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BUX78
SILICON PLANAR EPITAXIAL PNP TRANSISTOR

ABSOLUTE MAXIMUM RATINGS (T_C = 25°C unless otherwise stated)

V_{CBO}	Collector – Base Voltage		-100V
V_{CEO}	Collector – Emitter Voltage		-80V
V_{EBO}	Emitter – Base Voltage		-6V
I_C	Continuous Collector Current		5A
I_B	Base Current		0.8A
P_D	Total Power Dissipation at	T_C = 25°C	40W
		Derate Above 25°C	0.23W/°C
T_J	Junction Temperature Range		-65 to +200°C
T_{stg}	Storage Temperature Range		-65 to +200°C

THERMAL PROPERTIES

Symbols	Parameters	Min.	Typ.	Max.	Units
$R_{\theta JC}$	Thermal Resistance, Junction To Case			4.4	°C/W

ELECTRICAL CHARACTERISTICS (T_C = 25°C unless otherwise stated)

Symbols	Parameters	Test Conditions		Min.	Typ	Max.	Units
$V_{(BR)CEO}$ (1)	Collector-Emitter Breakdown Voltage	I_C = -50mA	I_B = 0	-80			V
$V_{(BR)CES}$	Collector-Emitter Breakdown Voltage	I_C = -2mA	V_{BE} = 0	-100			
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	I_E = -1.0mA	I_C = 0	-6			
I_{CEO}	Collector Cut-Off Current	V_{CE} = -60V	I_B = 0			-10	µA
I_{CBO}	Collector Cut-Off Current	V_{CB} = -80V	I_E = 0			-0.5	
			T_C = 150°C			-150	
I_{EBO}	Emitter Cut-Off Current	V_{EB} = -4V	I_C = 0			-0.5	
h_{FE} (1)	Forward-current transfer ratio	I_C = -0.5A	V_{CE} = -5V	50			
		I_C = -2A	V_{CE} = -5V	50		120	
		I_C = -5A	V_{CE} = -5V	30			
		I_C = -1.0A	V_{CE} = -5V T_C = -40°C	25			
$V_{CE(sat)}$ (1)	Collector-Emitter Saturation Voltage	I_C = -5A	I_B = -0.5A			-1.0	V
$V_{BE(sat)}$ (1)	Base-Emitter Saturation Voltage	I_C = -5A	I_B = -0.5A			-1.3	

DYNAMIC CHARACTERISTICS

$\|h_{fe}\|$	Small signal forward-current transfer ratio	I_C = -0.5A f = 20MHz	V_{CE} = -5V	1.5			
t_{on}	Turn-On Time	I_C = -5A I_{B1} = -0.5A	V_{CC} = -40V		0.3	0.4	µs
t_{off}	Turn-Off Time	I_C = -5A I_{B1} = I_{B2} = -0.5A	V_{CC} = -40V		1.1	2.5	