

TL/G/10036-44

DESCRIPTION

Process 77 is a double-diffused, silicon epitaxial planar device. Complement to Process 37.

APPLICATION

This device was designed for general purpose medium power amplifier and switching circuits that require collector currents to 2A.

PRINCIPAL DEVICE TYPES

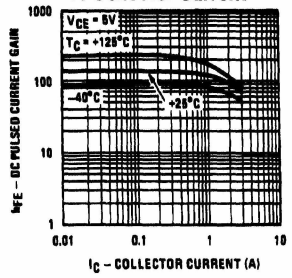
- TO-202 EBC:** NSDU51
- TO-237 EBC:** 2N6726, 92PU51
- TO-226 EBC:** MPS6726
- TO-92 EBC:** PN6726

ELECTRICAL CHARACTERISTICS (T_A = 25°C)

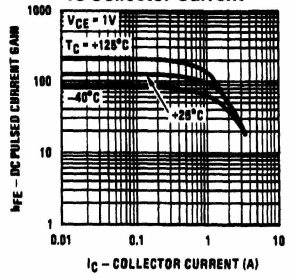
Symbol	Conditions	Min	Typ	Max	Units
BV _{CEO}	I _C = 10 mA	25			V
BV _{CBO}	I _C = 100 μA	35			V
BV _{EBO}	I _E = 10 μA	5			V
I _{CBO}	V _{CB} = 20V			100	nA
I _{EBO}	V _{EB} = 4V		10	100	nA
h _{FE}	I _C = 100A, V _{CE} = 1V I _C = 1 mA, V _{CE} = 1V	50 35	150	300	
V _{CE(SAT)}	I _C = 0.5A, I _B = 50 mA			0.5	V
V _{BE(SAT)}	I _C = 0.5A, I _B = 50 mA			1.3	V
f _T	I _C = 100 mA, V _{CE} = 10V	100	200		MHz
C _{ob}	V _{CE} = 10V, f = 1 MHz		28	35	pF
P _{D(max)}					
TO-202	T _C = 25°C	10			W
	T _A = 25°C	2			W
TO-226	T _A = 25°C	1			W
TO-237	T _C = 25°C	2			W
	T _A = 25°C	850			mW
TO-92	T _A = 25°C	600			mW
θ _{JC}					
TO-202	T _C = 25°C			12.5	°C/W
TO-237	T _C = 25°C			62.5	°C/W
θ _{JA}					
TO-202	T _A = 25°C			62.5	°C/W
TO-226	T _A = 25°C			125	°C/W
TO-237	T _A = 25°C			147	°C/W
TO-92	T _A = 25°C			208	°C/W
T _{J(max)}	All Plastic Parts	150			°C

Process 77

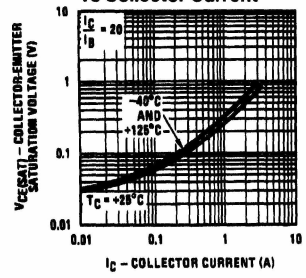
DC Pulsed Current Gain vs Collector Current



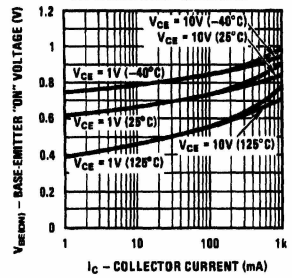
DC Pulsed Current Gain vs Collector Current



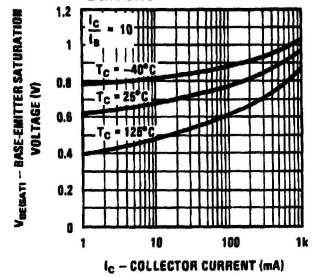
Collector-Emitter Saturation Voltage vs Collector Current



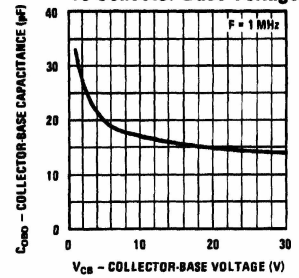
Base-Emitter ON Voltage vs Collector Current



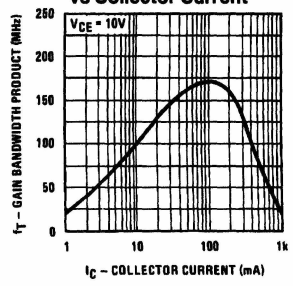
Base-Emitter Saturation Voltage vs Collector Current



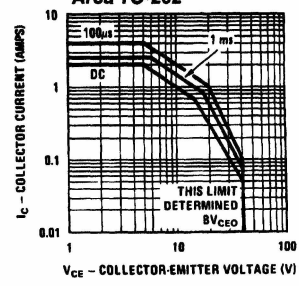
Collector-Base Capacitance vs Collector-Base Voltage



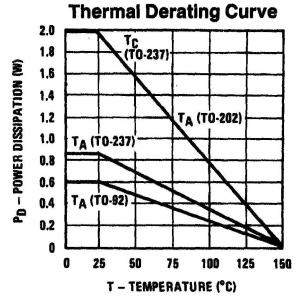
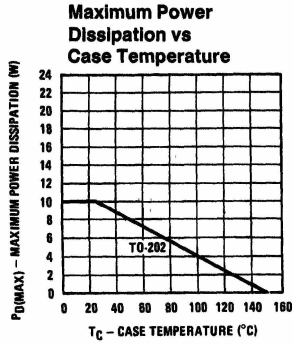
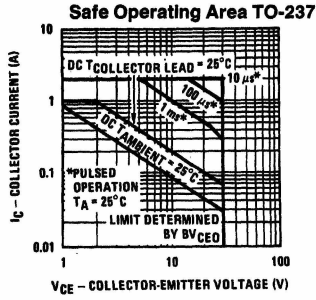
Gain Bandwidth Product vs Collector Current



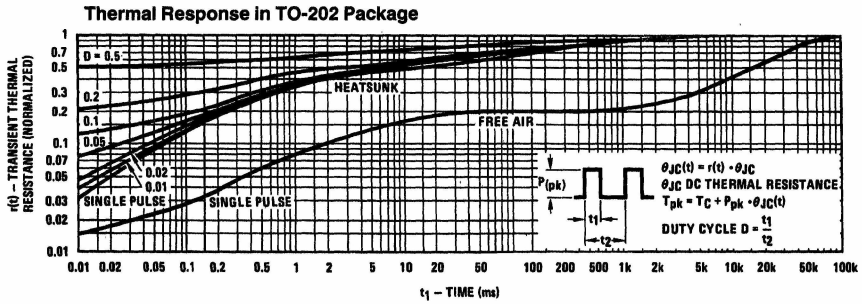
Safe Operating Area TO-202



TL/G/10038-45



TL/G/10038-46



TL/G/10038-48