

**ULTRA LOW  $r_{EC(sat)}$**   
**SILICON EPITAXIAL JUNCTION**  
**PNP/NPN SWITCHING TRANSISTORS**

2N3677  
2N5066

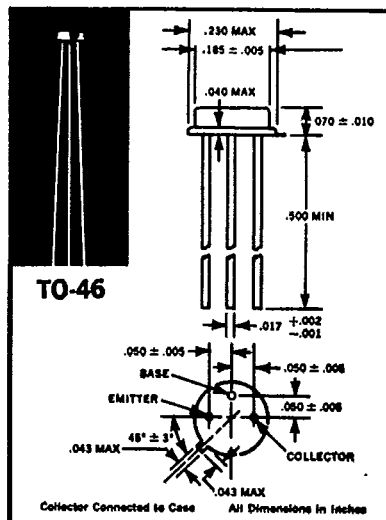
GEOMETRY 292, (2N3677)  
GEOMETRY 485, (2N5066)

T-37-23  
T-35-23

- COMPLEMENTARY TYPES 2N3677 (PNP) 2N5066 (NPN)
- $r_{EC(sat)}$  4 Ohms TYPICAL
- LOW  $C_{ob}$
- LOW LEAKAGE
- HIGH  $BV_{EBO}$

**ELECTRICAL DATA ABSOLUTE MAXIMUM RATINGS**

PARAMETER	SYMBOL	2N3677/2N5066	UNITS
Collector to Emitter Voltage	$BV_{CES}$	20	Volts
Emitter to Collector Voltage	$BV_{ECS}$	20	Volts
Collector to Base Voltage	$BV_{CBO}$	30	Volts
Emitter to Base Voltage	$BV_{EBO}$	30	Volts
Collector Current	$I_C$	100	mA
Power Dissipation	$P_C$	400	mW
Derating Factor	$D_F$	2.3	mW/°C
Junction Temperature (operating and storage)	$T_J$	-65°C to +200°C	
Lead Temperature (1/16" ± 1/32" from case)	$T_L$	240°C for 10 sec.	



**ELECTRICAL CHARACTERISTICS:  $T_A = 25^\circ\text{C}$  (UNLESS OTHERWISE STATED)**

PARAMETER	SYMBOL	CONDITION	2N3677/2N5066			UNITS
			Min.	Typ.	Max.	
Collector To Base Leakage	$I_{CBO}$	$V_{CB} = V_{CB} \text{ MAX.}$	—	0.5	1.0	nA
Emitter to Base Leakage	$I_{EBO}$	$V_{EB} = V_{EB} \text{ MAX.}$	—	0.5	1.0	nA
Collector To Base Leakage	$I_{CBO}$	$V_{CB} = V_{CB} \text{ MAX.}$ (TEMP = 100°C)	—	30	100	nA
Emitter To Base Leakage	$I_{EBO}$	$V_{EB} = V_{EB} \text{ MAX.}$ (TEMP = 100°C)	—	30	100	nA
Offset Voltage	$V_O$	$I_B = 1 \text{ mA}$ $I_E = 0$	—	0.7	1.0	mV
DC Common Collector Forward Current Transfer Ratio	$h_{FC}$	$V_{EC} = 6 \text{ V}$ $I_E = 1 \text{ mA}$	4	8	—	—
High Frequency Current Gain	$h_{fe}$	$V_{CE} = 6 \text{ V}, I_C = 1 \text{ mA}$ $f = 1 \text{ MC}$	5	10	—	—
Inverted Dynamic Saturation Resistance	$r_{EC(sat)}$	$I_o = 0.1 \text{ mA}$ $I_o = 1.0 \text{ mA}$ $f = 1 \text{ kHz}$	—	4	8	Ohms
Collector To Base Capacitance	$C_{ob}$	$V_{CB} = 6 \text{ V}, I_E = 0, f = 159 \text{ kHz}$	—	6	10	pfd
Emitter To Base Capacitance	$C_{eb}$	$V_{EB} = 6 \text{ V}, I_C = 0, f = 159 \text{ kHz}$	—	5	6	pfd



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