

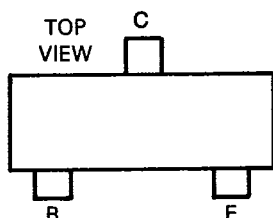
6367255 MOTOROLA SC (DIODES/OPTO)

34C 38255 D

SOT23 (continued)

T-29-19

DEVICE NO. **BCW66F,G,H**  
SMALL-SIGNAL NPN TRANSISTOR



- Designed for low-frequency driver stage and switching applications.

Device	Marking
BCW66F	EF
BCW66G	EG
BCW66H	EH

## MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	$V_{CE0}$	45	Vdc
Collector-Base Voltage	$V_{CBO}$	75	Vdc
Emitter-Base Voltage	$V_{EB}$	5.0	Vdc
Collector Current	$I_C$	800	mAdc

ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$  unless otherwise noted)

Parameter	Test Conditions	Min	Typ	Max	Unit	
$BV_{CE0}$	$I_C = 10 \text{ mAdc}, I_B = 0$	45	—	—	Vdc	
$BV_{EBO}$	$I_E = 10 \mu\text{Adc}, I_C = 0$	5.0	—	—	Vdc	
$BV_{CES}$	$I_C = 10 \mu\text{Adc}, V_{EB} = 0$	75	—	—	Vdc	
$I_{CES}$	$V_{CE} = 45 \text{ Vdc}, I_C = 0$	—	—	20	nAdc	
	$V_{CE} = 45 \text{ Vdc}, I_C = 0, T_A = 150^\circ\text{C}$	—	—	20	$\mu\text{Adc}$	
$I_{EBO}$	$V_{EB} = 4.0 \text{ Vdc}, I_C = 0$	—	—	20	nAdc	
$h_{FE}$	$I_C = 100 \mu\text{Adc}, V_{CE} = 1.0 \text{ Vdc}$	BCW66F	35	—	—	—
		BCW66G	50	—	—	
		BCW66H	80	—	—	
	$I_C = 10 \text{ mAdc}, V_{CE} = 1.0 \text{ Vdc}$	BCW66F	75	—	—	
		BCW66G	110	—	—	
		BCW66H	180	—	—	
	$I_C = 100 \text{ mAdc}, V_{CE} = 1.0 \text{ Vdc}$	BCW66F	100	—	250	
		BCW66G	160	—	400	
BCW66H		250	—	630		
$I_C = 500 \text{ mAdc}, V_{CE} = 2.0 \text{ Vdc}$	BCW66F	35	—	—		
	BCW66G	60	—	—		
	BCW66H	100	—	—		
$V_{CE(sat)}$	$I_C = 500 \text{ mAdc}, I_B = 50 \text{ mAdc}$	—	0.7	—	Vdc	
	$I_C = 100 \text{ mAdc}, I_B = 10 \text{ mAdc}$	—	0.3	—		

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continued

6367255 MOTOROLA SC (DIODES/OPTO)

34C 38256 D

SOT23 (continued)

BCW66F,G,H (continued)

T-29-19

Parameter	Test Conditions	Min	Typ	Max	Unit
$V_{BE(sat)}$	$I_C = 500 \text{ mAdc}, I_B = 50 \text{ mAdc}$	—	—	2.0	Vdc
$f_T$	$I_C = 20 \text{ mAdc}, V_{CE} = 10 \text{ Vdc}, f = 100 \text{ MHz}$	100	—	—	MHz
$C_{ob}$	$V_{CB} = 10 \text{ Vdc}, I_E = 0, f = 1.0 \text{ MHz}$	—	—	12	pF
$C_{ib}$	$V_{EB} = 0.5 \text{ Vdc}, I_C = 0, f = 1.0 \text{ MHz}$	—	—	80	pF
NF	$I_C = 0.2 \text{ mAdc}, V_{CE} = 5.0 \text{ Vdc}, R_S = 1.0 \text{ k}\Omega,$ $f = 1.0 \text{ kHz}, BW = 200 \text{ Hz}$	—	—	10	dB
$t_{on}$	$I_{B1} = I_{B2} = 15 \text{ mAdc}$	—	—	100	ns
$t_{off}$	$I_C = 150 \text{ mAdc}, R_L = 150 \text{ }\Omega$	—	—	400	ns