

# LIGHTING

Discretes & Standard ICs



Selection Guide

*STMicroelectronics*  
*More Intelligent Solutions*



# Power Bipolar Transistors

P / N	Package	V <sub>CEO</sub> (V)	V <sub>CEs</sub> /V <sub>CEsM</sub>	I <sub>C</sub> (A)	P <sub>Tot</sub> (W)
STBV68	TO-92	400	600	0.6	0.9
STBV45	TO-92	400	600	0.75	0.95
STBV42	TO-92	400	700	1	1
STBV32	TO-92	400	700	1.5	1.1
STX13003	TO-92	400	700	1.5	1.5
ST13003	SOT-32	400	700	1.5	40
BULT118	SOT-32	400	700	2	45
BULK128D-B	SOT-82	400	700	4	55
BULD1101ET4	DPAK	450	1100	3	35
STD13003-1	IPAK	400	700	1.5	20
BULD118D-1	IPAK	400	700	2	20
BULB39DT4	D <sup>2</sup> PAK	450	850	4	70
BULB49DT4	D <sup>2</sup> PAK	450	850	5	80
STB13005-1	I <sup>2</sup> PAK	400	700	4	75
BUL118	TO-220	400	700	3	60
BUL128	TO-220	400	700	4	70
BUL128D-B	TO-220	400	700	4	70
ST13005	TO-220	400	700	4	70
ST13007	TO-220	400	700	4	75
ST13007D	TO-220	400	700	8	80
BUL57	TO-220	400	700	8	80
BUL67	TO-220	400	700	8	85
BUL138	TO-220	400	700	10	100
BUL59	TO-220	400	850	5	80
BUL89	TO-220	400	850	8	90
BUL742	TO-220	400	850	12	110
BUL903ED#	TO-220	400	900	4	70
BUL742A	TO-220	400	900	5	70
BUL38D	TO-220	400	950	4	70
BUL58D	TO-220	450	800	5	80
		450	800	8	85

Ultra High Pressure Lamps  
Compact Fluorescent Lighting  
High Frequency Ballasts

PFC

Protection for High Frequency Ballasts

Christmas Tree Lighting

Fluorescent Tube Starter

Dimmer

Halogen Lamp Transformers

High Intensity Discharge Lamp & Street Lighting







STP4NC50/FP	TO-220 / FP	500	2.7	3.5	80 / 40	•	•													
STD3NC50/-1	DPAK / IPAK	500	2.7	3.2	60	•	•													
STD3NB50/-1	DPAK / IPAK	500	2.8	3	50	•	•													
STP4NB50/FP	TO-220 / FP	500	2.8	3.8	80 / 35	•	•													
STD2NB50/-1	DPAK / IPAK	500	6	1	40	•	•													
STD1NB50/-1	IPAK	500	9	1.4	45	•	•													
STD5NM60/-1	DPAK / IPAK	600	1	5	50	•	•													
IRFBC40	TO-220	600	1.2	6.2	125	•	•													
STP6NC60/FP $\Delta$	TO-220 / FP	600	1.2	6	125 / 40	•	•													
STP6LNC60/FP	TO-200 / FP	600	1.25	5.8	105 / 35	•	•													
STP7NB60/FP $\Delta$	TO-220	600	1.2	7.2	125 / 40	•	•													
STP5NB60/FP $\Delta$	TO-220 / FP	600	2	5	100 / 35	•	•													
IRFBC30	TO-220	600	2.2	3.6	100	•	•													
STP4NC60/FP	TO-220 / FP	600	2.2	4.2	100 / 35	•	•													
STD3NC60/-1	DPAK / IPAK	600	2.2	3.2	50	•	•													
STD2NB60/-1	DPAK / IPAK	600	3.6	2.6	50	•	•													
STD2NC60/-1	DPAK / IPAK	600	3.6	2	60	•	•													
STP3NB60/FP $\Delta$	TO-220 / FP	600	3.6	3.3	80 / 35	•	•													
STP3NC60/FP	TO-220 / FP	600	3.6	3	80 / 40	•	•													
STD1HNC60/-1	DPAK / IPAK	600	5	2	50	•	•													
STD1NC60/-1	DPAK / IPAK	600	8	1.4	35	•	•													
STP2NC60 /FP	TO-220 / FP	600	8	1.9	70 / 30	•	•													
STP3NB80/FP	TO-220/FP	800	6.5	2.6	90 / 35	•	•													
STP5NC90Z/FP $\Delta$	TO-220 / FP	900	2.5	4.6	125 / 40	•	•													
STP3NC90Z/FP $\Delta$	TO-220 / FP	900	3.5	3.5	100 / 35	•	•													
STD2NC90Z/-1	IPAK / TO-220 / FP	900	5.5	2	-	•	•													
STP2NC90Z/FP*																				

\* in development  $\Delta$  available in D<sup>2</sup>PAK or PPAK  $\diamond$  available in SO-8  $\circ$  In TO-220FP current is limited by package thermal resistance

## IGBTs

P / N	Package	V <sub>cesat</sub> (V)	V <sub>cesat</sub> (V)	I <sub>c</sub> (A) @ 100C	t <sub>fall</sub> (ns)
STGD3NB60S	DPAK	600	1.2	3	1000
STGD3NB60SD	DPAK	600	1.2	3	1000
STGD7NB60S	DPAK	600	1.2	7	1000
STGD10NB60S	TO-220	600	1.35	10	1000
STGB3NB60SD	D <sup>2</sup> PAK	600	1.2	3	1000

# Thyristors



P / N	Package	Description	I <sub>T(RMS)</sub> (A)	V <sub>RRM/DRM</sub> (V)	I <sub>GT</sub> max (mA)
BTA08-600B	TO-220AB Ins.	Std TRIAC 8A 600V 50mA	8	600	50
BTA08-600BW	TO-220AB Ins.	Snubberless TRIAC 8A 600V 50mA	8	600	50
BTA08-600C	TO-220AB Ins.	Std TRIAC 8A 600V 25mA	8	600	25
BTA08-600CW	TO-220AB Ins.	Snubberless TRIAC 8A 600V 25mA	8	600	25
BTA08-600SW	TO-220AB Ins.	Snubberless TRIAC 8A 600V 10mA	8	600	10
BTA08-600TW	TO-220AB Ins.	Snubberless TRIAC 8A 600V 5mA	8	600	5
BTA08-800B	TO-220AB Ins.	Std TRIAC 8A 800V 50mA	8	800	50
BTA08-800BW	TO-220AB Ins.	Snubberless TRIAC 8A 800V 50mA	8	800	50
BTA08-800C	TO-220AB Ins.	Std TRIAC 8A 800V 25mA	8	800	25
BTA08-800CW	TO-220AB Ins.	Snubberless TRIAC 8A 800V 25mA	8	800	25
BTA08-800SW	TO-220AB Ins.	Snubberless TRIAC 8A 800V 10mA	8	800	10
BTA08-800TW	TO-220AB Ins.	Snubberless TRIAC 8A 800V 5mA	8	800	5
BTA10-600B	TO-220AB Ins.	Std TRIAC 10A 600V 50mA	12	600	50
BTA10-600BW	TO-220AB Ins.	Snubberless TRIAC 10A 600V 50mA	12	600	50
BTA10-600C	TO-220AB Ins.	Std TRIAC 10A 600V 25mA	12	600	25
BTA10-600CW	TO-220AB Ins.	Snubberless TRIAC 10A 600V 25mA	12	600	25
BTA10-600SW	TO-220AB Ins.	Snubberless TRIAC 10A 600V 10mA	12	600	10
BTA10-600TW	TO-220AB Ins.	Snubberless TRIAC 10A 600V 5mA	12	600	5
BTA10-800B	TO-220AB Ins.	Std TRIAC 10A 800V 50mA	12	800	50
BTA10-800BW	TO-220AB Ins.	Snubberless TRIAC 10A 800V 50mA	12	800	50
BTA10-800C	TO-220AB Ins.	Std TRIAC 10A 800V 25mA	12	800	25
BTA10-800CW	TO-220AB Ins.	Snubberless TRIAC 10A 800V 25mA	12	800	25
BTA10-800SW	TO-220AB Ins.	Snubberless TRIAC 10A 800V 10mA	12	800	10
BTA10-800TW	TO-220AB Ins.	Snubberless TRIAC 10A 800V 5mA	12	800	5
BTA12-600B	TO-220AB Ins.	Std TRIAC 12A 600V 50mA	12	600	50
BTA12-600BW	TO-220AB Ins.	Snubberless TRIAC 12A 600V 50mA	12	600	50
BTA12-600C	TO-220AB Ins.	Std TRIAC 12A 600V 25mA	12	600	25
BTA12-600CW	TO-220AB Ins.	Snubberless TRIAC 12A 600V 25mA	12	600	25
BTA12-600SW	TO-220AB Ins.	Snubberless TRIAC 12A 600V 10mA	12	600	10
BTA12-600TW	TO-220AB Ins.	Snubberless TRIAC 12A 600V 5mA	12	600	5

Compact Fluorescent Lighting

High Frequency Ballasts

PFC

Protection for High Frequency Ballasts

Christmas Tree Lighting

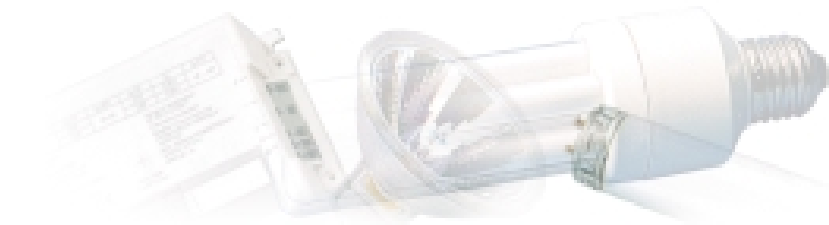
Fluorescent Tube Starter

Dimmer

Halogen Lamp Transformers

High Intensity Discharge Lamp & Street Lighting





Compact Fluorescent Lighting  
High Frequency Ballasts  
Fluorescent Tube Starter

## Standard Logic

P / N	Package	V <sub>DS</sub> (max)	ID (T <sub>C</sub> =25°C)	Temp. Range (°C)	EAS	R <sub>DS</sub> (on) (Ω)			
STPIC6C595	SO-16	33	0.1	-40 to +125	30mJ	7	●		

## VIpower

P / N	Package	B <sub>V</sub> CS	I <sub>C</sub>	V <sub>CS</sub> (sat)			
VK05CFL	SO-8	520V at 10μA	0.25Arms	1.4V at 300mA	●		

## Chip Set for Fluorescent Lamp Starter (Driver IC plus Power Switch)

P / N	Package	Description	Lamp Power	Line Freq.	Preheat Time	Temp			
EFS2A-CD	SO-14	Electronic Starter 1350V 50/60Hz	18-70W	50Hz	1.5/2.5s	-30+85°C			●
EFS2B-CD	SO-14	Electronic Starter Driver 50Hz	18-70W	50/60Hz	0.6/1.0s	-30+85°C			●
EFS21-TL5	PENTAWATT HV	Electronic Starter Driver 50Hz	18-70W	-	-	-30+85°C			●

Providing smooth and flicker-free lamp start, extended life-time for the tube lamp and automatic shutdown in case of tube failure, significant cost savings can be achieved with the EFS in lighting maintenance.



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