

BG Bipolar Discretes
April 7, 2020

nexperia



Nexperia Customer Hand Out

LED Light Drivers

LED Light Driver

Simple, elegant & price efficient

Design Benefits

- Output current up to 250mA for NCR32x types
- AEC-Q101 qualified
- NPN & PNP technology
- Can be controlled by logic or μ Controller directly (NCRx21x types)
- Lead-less ultra small package available (SOT1118, DFN2020)

Key Technical Features & Portfolio


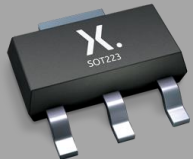



- High thermal power capability
- Stabilized output current adjustable up to 65mA when external resistor is used
- 1:1 Replacement for Infineon & Diodes Inc. (BCR series etc.)

Key Parameters

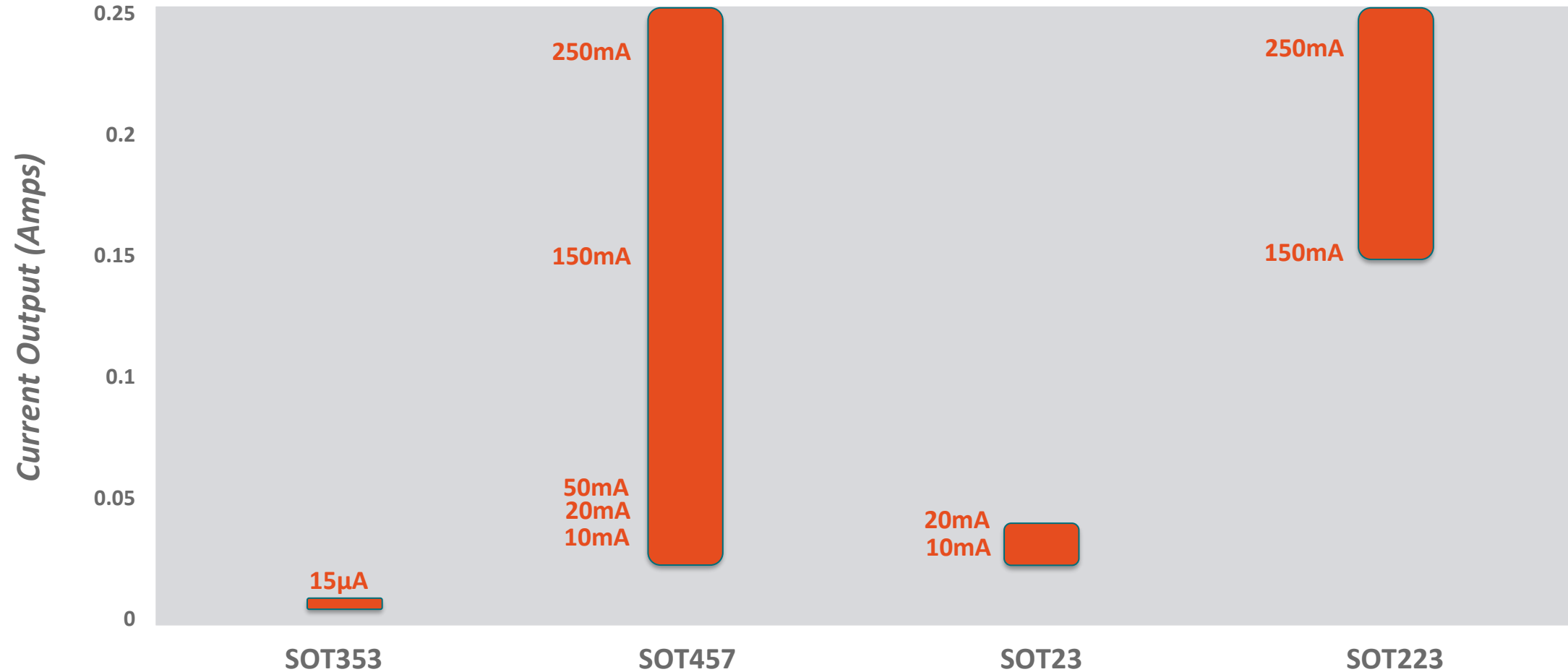
- Current capability up to 250mA
- Maximum supply voltage up to 40V

Available Packages

(W x L x H in mm)

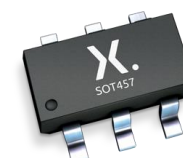
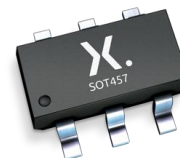
SOT23  2.9 x 1.3 x 1	SOT223  6.5 x 3.5 x 1.65
SOT1118D (DFN2020D-6)  2 x 2 x 0.65	SOT353  2.0 x 2.1 x 0.95
SOT457  2.9 x 2.5 x 1.1	

Nexperia LED Drivers



Mid/Low Power LED drivers

	PSSI2021SAY	NCR405U	NCR402U	NCR401U
Supply Voltage VS	75 V	40 V	40 V	40 V
Output Current Iout (With External Resistor)	50 mA	65 mA	65 mA	65 mA
LED drive current Iout (Without External Resistor) @VS = 10 V	15 uA	50 mA	20 mA	10 mA
RInt	48 kΩ	17 Ω	44 Ω	91 Ω
Package	SOT353	SOT457	SOT457	SOT457
Package dimension in mm	2.0 x 1.3 x 0.95	2.9 x 1.5 x 1.1	2.9 x 1.5 x 1.1	2.9 x 1.5 x 1.1
Availability	Mass Production	Mass Production	Mass Production	Mass production
AEC-Q101	YES	YES	YES	YES
Market cross	-	BCR405U Infineon BCR405U Diodes	BCR402U Infineon BCR402U Diodes	BCR401U Infineon BCR401U Diodes



Low Power LED drivers-NCR40xT Series SOT23

Nexperia Type	NCR402T	NCR401T
Supply Voltage VS	18 V	18 V
LED drive current Iout (Without External Resistor) @VS = 10 V	20 mA	10 mA
RInt	44 Ω	91 Ω
Package	SOT23	SOT23
Package dimension in mm	2.9 x 1.3 x 1	2.9 x 1.3 x 1
Availability	Mass Production	Mass Production
AEC-Q101	YES	YES
Market cross	None	None



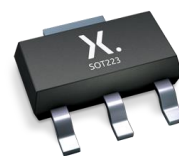
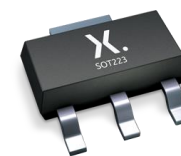
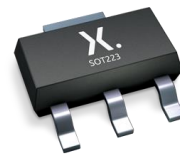
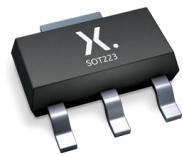
Mid Power LED drivers Nexperia

Nexperia Type	NCR320U	NCR321U	NCR420U	NCR421U
Supply Voltage V_S	16 V	16 V	40 V	40 V
Max Output Current I_{Out}	250 mA	250 mA	150 mA	150 mA
R_{base}	10 k Ω	1.5 k Ω	20 k Ω	1.5 k Ω
Max. V_{EN}	25 V	4.5 V	25 V	4.5 V
Package	SOT457	SOT457	SOT457	SOT457
Package dimension in mm	2.9 x 1.5 x 1.1	2.9 x 1.5 x 1.1	2.9 x 1.5 x 1.1	2.9 x 1.5 x 1.1
Availability	Mass Production	Mass Production	Mass Production	Mass Production
AEC-Q101	YES	YES	YES	YES
Market cross	BCR320U Infineon	BCR321U Infineon	BCR420U Infineon BCR420U Diodes	BCR421U Infineon BCR421U Diodes



Mid Power LED drivers Nexperia

Nexperia Type	NCR320Z	NCR321Z	NCR420Z	NCR421Z
Supply Voltage V_S	16 V	16 V	40 V	40 V
Max Output Current I_{Out}	250 mA	250 mA	150 mA	150 mA
R_{base}	10 k Ω	1.5 k Ω	20 k Ω	1.5 k Ω
Max. V_{EN}	25 V	4.5 V	25 V	4.5 V
Package	SOT223	SOT223	SOT223	SOT223
Package dimension in mm	6.5 x 3.5 x 1.65	6.5 x 3.5 x 1.65	6.5 x 3.5 x 1.65	6.5 x 3.5 x 1.65
Availability	Mass Production	Mass Production	Mass Production	Mass Production
AEC-Q101	YES	YES	YES	YES
Market cross	None	None	None	None



Lighting Applications Supported

What can Nexperia Light Drivers Do

Automotive Lighting



General Lighting



White Goods





MORE EXPERTISE

LESS COMPLEXITY



▶ Every piece of electronics in the world can benefit from Nexperia efficiency. That's every design, from the simplest phone charger or light switch to the most complex hybrid automobile. Efficiency means we produce the world's most essential semiconductors, the finishing touches that empower electronic designs everywhere. That's all we do, **more or less.**